# 1982 SURVEY OF THE ELECTRONIC FUNDS TRANSFER TRANSACTION SYSTEM

by

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# 1982 SURVEY OF THE ELECTRONIC FUNDS TRANSFER TRANSACTION SYSTEM

This study, the fifth in a series of Bank Administration Institute annual surveys on EFT transactions, concentrates on two EFT services: ACH and ATMs. The report analyzes growth, usage patterns, and transaction mix so that financial institutions can measure their own program experience and compare it with other financial institutions.

Several additions have been made to this year's survey — the differentiation of proprietary and interchange ATM transactions and a detailed breakdown of ATM locations.

## Background

Bank Administration Institute has been a leader in payments systems research for several years by conducting studies of both the check collection system and the emerging technology for the electronic transfer of funds. To consolidate research in the payments system, the BAI Check Collection Performance Measurement Survey was expanded in 1978 to begin tracking electronic and paper transactions. This is the fifth year EFT data have been accumulated. The 1978 data were published in the form of a research survey. The 1979 data were published separately from the Check Collection Survey, in a format that subsequent reports followed closely. The EFT Survey, which has been conducted by BAI since 1978, is a one-week survey of the EFT activity of major banks. This year the survey was mailed to 201 banks with assets over $250 million.

## Survey Respondents

In 1982, a total of 157 banks participated in the BAI EFT Survey by collecting data on both paper and electronic funds transfer transactions during the week of November 15-19. These data provide a one-week "snapshot" that allows performance comparisons with surveys conducted during similar periods in 1978, 1979, 1980, and 1981.

The results were obtained by analyzing the data supplied by the 153 banks that answered the questions on ACH transactions and by the 142 banks that answered the questions on ATM transactions. All the participating banks had assets of more than $250 million.

Several respondents could not answer every survey question because of constraints inherent in the internal systems in their banks. Consequently, only those banks that furnished valid answers to all questions pertaining to a given formula were included in the tabulations, which accounts for the varying number of respondents shown in the different tables. The formulas used for tabulating the results are provided to assist bankers in replicating the survey within their own banks for purposes of comparison.

Although the identities of reporting banks remain confidential, banks can use the data to compare their performance within a given market. A map in Appendix B defines the boundaries of the 16 geographic areas used in developing this report. An accompanying table shows the number of survey respondents from each area.

In November, 1982, 32 ACHs were operating in the United States. During the survey period, total monthly volume reached almost 34,000,000 transactions, an increase of slightly more than 32% over the total volume during the previous year. Government credits accounted for more than 17,600,000 transactions, or 51.7% of total ACH transactions.

The National Clearing House Association (NACHA), increased volume from the private sector. Volume from the private sector during the 1982 survey period was slightly more than 16,400,000 transactions, a 49.1% increase over the approximately 11,000,000 transactions during the same time period in 1981. Because most government credits are initiated within the first few days of each month (predominately Social Security payments), the findings from the mid-November survey are primarily private sector debits and credits.

Since the survey is not all-inclusive, but limited to a sample of commercial banks with assets over $250 million, the volume of ACH transactions recorded by survey participants is statistically insignificant. However, when the data are represented as percentages, trends relating to transaction types and points of origin and destination can be observed.

## ACH Transactions Sent

The percent of ACH debits and credits sent by area is shown in Table 1. Overall, banks sent more debits (73.1%) than credits (26.9%) — a slight increase over the 1981 study. The geographic areas of New York, Philadelphia, Pittsburgh, Cleveland, Minneapolis/St. Paul, St. Louis, Dallas, Los Angeles and San Francisco reported an increase in the percentage of debits sent. Six areas in the survey reported sending more debits than credits: Atlanta (50.9% vs. 49.1%), Detroit (52.9% vs. 47.1%), St. Louis (55.7% vs. 44.3%), Dallas, (86.8% vs. 13.2%), Denver (55.7% vs. 44.3%), and for the fourth consecutive year, Houston (61.9% vs. 38.1%). The median rates were 37.7% for debits sent and 62.3% for credits sent.

## ACH Transactions Received

For the third consecutive year, average debits received exceeded average credits received (see Table 2). In the survey, average debits received increased to 66.0% in 1982 from 62.2% in 1981. All areas reported receiving more debits than credits. Median figures were consistent with the average percentages, with median percent debits sent 67.6% and median percent credits sent 32.4%.

Table 1
Percent of ACH Debits and Credits Sent by Area

| Area | Percent Debits$^{+}$ | | | | | Percent Credits$^{\pm}$ | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1978 | 1979 | 1980 | 1981 | 1982 | 1978 | 1979 | 1980 | 1981 | 1982 |
| Boston | 0.2% | 2.1% | 10.9% | 21.2% | 19.8% | 99.8% | 97.9% | 89.1% | 78.8% | 80.2% |
| New York | 92.5 | 12.3 | 29.2 | 14.5 | 20.8 | 7.5 | 87.7 | 70.8 | 85.5 | 79.2 |
| Philadelphia | 13.6 | 5.2 | 9.7 | 14.7 | 27.1 | 86.4 | 94.8 | 90.3 | 85.3 | 72.9 |
| Pittsburgh | 7.8 | 25.8 | 31.7 | 28.0 | 36.1 | 92.2 | 74.2 | 68.3 | 62.0 | 63.9 |
| Washington, D.C. | 21.0 | 15.2 | 20.3 | 50.2 | 33.1 | 79.0 | 84.8 | 79.7 | 49.8 | 66.9 |
| Atlanta | 74.0 | 43.0 | 37.0 | 51.3 | 50.9 | 26.0 | 57.0 | 63.0 | 48.7 | 49.1 |
| Chicago | 33.5 | 7.6 | 19.7 | 24.8 | 23.0 | 66.5 | 92.4 | 80.3 | 75.2 | 77.0 |
| Cleveland | 18.5 | 10.5 | 33.4 | 43.3 | 47.6 | 81.5 | 89.5 | 66.6 | 56.7 | 52.4 |
| Detroit | 4.6 | 10.0 | 32.7 | 59.3 | 52.9 | 95.4 | 90.0 | 67.3 | 40.7 | 47.1 |
| Minneapolis/St. Paul | * | * | * | 30.5 | 45.1 | * | * | * | 69.5 | 54.9 |
| St. Louis | 61.0 | 17.9 | 43.3 | 48.7 | 55.7 | 39.0 | 82.1 | 56.7 | 51.3 | 44.3 |
| Dallas | 15.1 | 0.0 | 46.6 | 49.6 | 86.8 | 84.9 | 100.0 | 53.4 | 50.4 | 13.2 |
| Houston | 32.9 | 52.3 | 58.1 | 65.1 | 61.9 | 67.1 | 47.7 | 41.9 | 34.9 | 38.1 |
| Los Angeles | 25.2 | 10.4 | 47.2 | 21.0 | 31.1 | 74.8 | 89.6 | 52.8 | 79.0 | 68.9 |
| San Francisco | 12.7 | 40.9 | 49.4 | 46.2 | 48.5 | 87.3 | 59.1 | 50.6 | 53.8 | 51.5 |
| Denver | 1.7 | 14.7 | 57.5 | 62.6 | 55.7 | 98.3 | 85.3 | 42.5 | 37.4 | 44.3 |
| Average | 44.0% | 29.5% | 66.1% | 69.5% | 73.1% | 56.0% | 70.5% | 33.9% | 30.5% | 26.9% |
| Median | 17.7% | 0.7% | 13.7% | 33.4% | 37.7% | 100.0% | 99.3% | 86.3% | 66.6% | 62.3% |

*No respondents; $\frac{+Q1}{Q5} \times 100$; $\frac{\pm Q3}{Q5} \times 100$.

Table 2
Percent of ACH Debits and Credits Received by Area

| Area | Percent Debits$^{+}$ | | | | | Percent Credits$^{\pm}$ | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1978 | 1979 | 1980 | 1981 | 1982 | 1978 | 1979 | 1980 | 1981 | 1982 |
| Boston | 15.3% | 8.7% | 57.7% | 59.1% | 51.9% | 84.7% | 91.3% | 42.3% | 40.9% | 48.1% |
| New York | 53.8 | 25.3 | 76.2 | 54.5 | 66.6 | 46.2 | 74.7 | 23.8 | 45.5 | 33.4 |
| Philadelphia | 65.3 | 4.5 | 75.9 | 62.2 | 65.6 | 34.7 | 95.5 | 24.1 | 37.8 | 34.4 |
| Pittsburgh | 8.6 | 2.9 | 80.3 | 67.4 | 67.0 | 91.4 | 97.1 | 19.7 | 32.6 | 33.0 |
| Washington, D.C. | 41.4 | 11.1 | 53.4 | 47.2 | 61.0 | 58.6 | 88.9 | 46.6 | 52.8 | 39.0 |
| Atlanta | 45.4 | 24.7 | 68.0 | 71.2 | 68.9 | 54.6 | 75.3 | 32.0 | 28.8 | 31.1 |
| Chicago | 18.7 | 3.7 | 59.7 | 51.1 | 57.2 | 81.3 | 96.3 | 40.3 | 48.9 | 42.8 |
| Cleveland | 54.4 | 5.7 | 57.5 | 52.3 | 66.8 | 45.6 | 94.3 | 42.5 | 47.7 | 33.2 |
| Detroit | 16.3 | 36.4 | 72.6 | 60.4 | 61.9 | 83.7 | 63.6 | 27.4 | 39.6 | 38.1 |
| Minneapolis/St. Paul | * | * | * | 52.6 | 61.5 | * | * | * | 47.4 | 38.5 |
| St. Louis | 38.5 | 21.5 | 63.3 | 69.0 | 62.2 | 61.5 | 78.5 | 36.7 | 31.0 | 37.8 |
| Dallas | 11.9 | 2.1 | 68.5 | 72.1 | 66.2 | 88.1 | 97.9 | 31.5 | 27.9 | 33.8 |
| Houston | 14.9 | 15.8 | 79.0 | 83.5 | 66.4 | 85.1 | 84.2 | 21.0 | 16.5 | 33.6 |
| Los Angeles | 66.2 | 15.1 | 54.1 | 69.7 | 59.4 | 33.8 | 84.9 | 45.9 | 30.3 | 40.6 |
| San Francisco | 35.7 | 17.6 | 70.4 | 72.0 | 53.6 | 64.3 | 82.4 | 29.6 | 28.0 | 46.4 |
| Denver | 6.7 | 2.1 | 57.5 | 71.3 | 66.9 | 93.3 | 97.9 | 42.5 | 28.7 | 33.1 |
| Average | 36.7% | 11.1% | 58.5% | 62.2% | 66.6% | 63.3% | 88.9% | 41.5% | 37.8% | 33.4% |
| Median | 25.8% | 4.3% | 72.9% | 64.7% | 67.6% | 69.9% | 95.7% | 27.1% | 35.3% | 32.4% |

*No respondents; $\frac{+Q2}{Q6} \times 100$; $\frac{\pm Q4}{Q6} \times 100$.

Sent Versus Received

Table 3 shows the percent of ACH items sent versus received by geographic area for debits, credits, and total ACH volume. All areas reported receiving more debits than credits, while Chicago was the only area sending more credits (57.0%) than were received. Chicago also reported sending more total ACH items (53.0%) than were received. All other areas in the survey received more total ACH items than were sent. For the second consecutive year, the average total ACH items sent (54.4%) was higher than the total ACH items received.

Table 3
Percent of ACH Items Sent Versus Received by Area

Percent of Debits[+]

| | Sent | | | | | Received | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Area | 1978 | 1979 | 1980 | 1981 | 1982 | 1978 | 1979 | 1980 | 1981 | 1982 |
| Boston | 0.7% | 16.6% | 19.4% | 31.9% | 14.5% | 99.3% | 83.4% | 80.6% | 68.1% | 85.5% |
| New York | 81.4 | 10.8 | 12.5 | 13.0 | 17.8 | 18.6 | 89.2 | 87.5 | 87.0 | 82.2 |
| Philadelphia | 6.0 | 10.1 | 4.1 | 11.1 | 13.0 | 94.0 | 89.9 | 95.9 | 88.9 | 87.0 |
| Pittsburgh | 43.8 | 17.5 | 27.6 | 24.6 | 15.2 | 56.2 | 82.5 | 72.4 | 75.4 | 84.8 |
| Washington, D.C. | 15.3 | 22.2 | 14.5 | 28.7 | 22.6 | 84.7 | 77.8 | 85.5 | 71.3 | 77.4 |
| Atlanta | 46.3 | 22.6 | 15.5 | 26.9 | 22.2 | 53.7 | 77.4 | 84.5 | 73.1 | 77.8 |
| Chicago | 69.6 | 17.2 | 22.2 | 30.4 | 33.3 | 30.4 | 82.8 | 77.8 | 69.6 | 66.7 |
| Cleveland | 8.0 | 22.6 | 36.0 | 38.3 | 37.0 | 92.0 | 77.4 | 64.0 | 61.7 | 63.0 |
| Detroit | 1.6 | 4.6 | 19.0 | 13.5 | 17.7 | 98.4 | 95.4 | 81.0 | 86.5 | 82.3 |
| Minneapolis/St. Paul | * | * | * | 23.6 | 35.2 | * | * | * | 76.4 | 64.8 |
| St. Louis | 22.3 | 15.4 | 27.1 | 36.5 | 29.9 | 77.7 | 84.6 | 72.9 | 63.5 | 70.1 |
| Dallas | 36.6 | 0.0 | 21.6 | 17.5 | 30.4 | 63.4 | 100.0 | 78.4 | 82.5 | 69.6 |
| Houston | 12.6 | 18.7 | 31.2 | 25.7 | 18.4 | 87.4 | 81.3 | 68.8 | 74.3 | 81.6 |
| Los Angeles | 4.4 | 11.5 | 9.8 | 3.7 | 12.9 | 95.6 | 88.5 | 90.2 | 96.3 | 87.1 |
| San Francisco | 24.4 | 30.4 | 13.1 | 19.6 | 11.7 | 75.6 | 69.6 | 86.9 | 80.4 | 88.3 |
| Denver | 7.6 | 35.2 | 13.1 | 19.7 | 26.7 | 92.4 | 64.8 | 86.9 | 80.3 | 73.3 |
| Average | 38.4% | 39.6% | 52.6% | 56.3% | 56.9% | 61.6% | 60.4% | 47.4% | 43.7% | 43.1% |
| Median | 0.0% | 0.0% | 0.1% | 7.3% | 8.2% | 100.0% | 100.0% | 99.9% | 92.7% | 91.8% |

*No respondents; [+] $\frac{Q1/Q2}{Q1 + Q2} \times 100$; [±] $\frac{Q3/Q4}{Q3 + Q4} \times 100$; [§] $\frac{Q5/Q6}{Q5 + Q6} \times 100$.

Note: The preceding footnote also pertains to the continuation of Table 3 on the following page.

Table 3 (continued)

Percent of Credits[±]

| Area | Sent 1978 | Sent 1979 | Sent 1980 | Sent 1981 | Sent 1982 | Received 1978 | Received 1979 | Received 1980 | Received 1981 | Received 1982 |
|---|---|---|---|---|---|---|---|---|---|---|
| Boston | 42.4% | 26.5% | 53.9% | 73.2% | 47.4% | 57.6% | 73.5% | 46.1% | 26.8% | 52.6% |
| New York | 29.2 | 25.7 | 24.5 | 39.0 | 41.0 | 70.8 | 74.3 | 75.5 | 61.0 | 59.0 |
| Philadelphia | 43.3 | 5.8 | 24.2 | 26.3 | 40.9 | 56.7 | 94.2 | 75.8 | 73.7 | 59.1 |
| Pittsburgh | 46.1 | 6.6 | 44.3 | 34.6 | 21.2 | 53.9 | 93.4 | 55.7 | 65.4 | 78.8 |
| Washington, D.C. | 32.4 | 9.2 | 47.9 | 30.1 | 34.3 | 67.6 | 90.8 | 52.1 | 69.9 | 65.7 |
| Atlanta | 20.1 | 11.1 | 32.2 | 30.5 | 27.9 | 79.9 | 88.9 | 67.8 | 69.5 | 72.1 |
| Chicago | 51.2 | 15.6 | 48.6 | 43.5 | 57.0 | 48.8 | 84.4 | 51.4 | 56.5 | 43.0 |
| Cleveland | 31.3 | 17.9 | 60.8 | 42.6 | 49.7 | 68.7 | 82.1 | 39.2 | 57.4 | 50.3 |
| Detroit | 6.3 | 4.2 | 43.3 | 14.4 | 11.5 | 93.7 | 95.8 | 56.7 | 85.6 | 88.5 |
| Minneapolis/St. Paul | * | * | * | 51.8 | 44.4 | * | * | * | 48.2 | 55.6 |
| St. Louis | 10.3 | 30.6 | 49.2 | 41.4 | 41.2 | 89.7 | 69.4 | 50.8 | 58.6 | 58.8 |
| Dallas | 30.6 | 4.3 | 39.5 | 34.5 | 15.0 | 69.4 | 95.7 | 60.5 | 65.5 | 85.0 |
| Houston | 4.9 | 17.6 | 30.8 | 25.7 | 6.4 | 95.1 | 82.4 | 69.2 | 74.3 | 93.6 |
| Los Angeles | 21.3 | 12.8 | 15.5 | 15.0 | 21.1 | 78.7 | 87.2 | 84.5 | 85.0 | 78.9 |
| San Francisco | 55.3 | 15.3 | 14.7 | 24.8 | 16.5 | 44.7 | 84.7 | 85.3 | 75.2 | 83.5 |
| Denver | 25.4 | 7.4 | 19.7 | 20.9 | 31.4 | 76.6 | 92.6 | 80.3 | 79.1 | 68.6 |
| Average | 31.5% | 16.2% | 44.6% | 48.2% | 48.6% | 68.5% | 83.8% | 55.4% | 51.8% | 51.4% |
| Median | 10.8% | 5.0% | 30.0% | 28.4% | 25.3% | 85.9% | 95.0% | 70.0% | 71.6% | 74.7% |

Table 3 (continued)

Total ACH Item§

| Area | Sent 1978 | Sent 1979 | Sent 1980 | Sent 1981 | Sent 1982 | Received 1978 | Received 1979 | Received 1980 | Received 1981 | Received 1982 |
|---|---|---|---|---|---|---|---|---|---|---|
| Boston | 38.4% | 26.0% | 42.8% | 66.0% | 37.5% | 61.6% | 74.0% | 57.2% | 34.0% | 62.5% |
| New York | 71.8 | 27.5 | 21.7 | 26.5 | 35.0 | 28.2 | 72.5 | 78.3 | 73.5 | 65.0 |
| Philadelphia | 23.4 | 5.9 | 14.2 | 19.0 | 29.5 | 76.6 | 94.1 | 85.8 | 81.0 | 70.5 |
| Pittsburgh | 45.9 | 7.8 | 36.0 | 28.2 | 17.3 | 54.1 | 92.2 | 64.0 | 71.8 | 82.7 |
| Washington, D.C. | 26.3 | 11.1 | 37.4 | 33.5 | 29.3 | 73.7 | 88.9 | 62.6 | 66.5 | 70.7 |
| Atlanta | 34.6 | 16.3 | 23.9 | 31.1 | 26.3 | 65.4 | 83.7 | 76.1 | 68.9 | 73.7 |
| Chicago | 56.2 | 16.8 | 45.5 | 42.8 | 53.0 | 43.8 | 83.2 | 54.5 | 57.2 | 47.0 |
| Cleveland | 20.3 | 18.8 | 57.0 | 43.6 | 46.6 | 79.7 | 81.2 | 43.0 | 56.4 | 53.4 |
| Detroit | 5.6 | 3.2 | 28.4 | 14.6 | 15.0 | 94.4 | 96.8 | 71.6 | 85.4 | 85.0 |
| Minneapolis/St. Paul | * | * | * | 41.6 | 39.6 | * | * | * | 58.4 | 60.4 |
| St. Louis | 15.4 | 30.3 | 46.8 | 41.0 | 43.6 | 84.6 | 69.7 | 53.2 | 59.0 | 56.4 |
| Dallas | 31.4 | 4.2 | 33.0 | 22.6 | 25.0 | 68.6 | 95.8 | 67.0 | 77.4 | 75.0 |
| Houston | 6.1 | 18.6 | 32.7 | 27.3 | 15.1 | 93.9 | 81.4 | 67.3 | 72.7 | 84.9 |
| Los Angeles | 10.9 | 12.9 | 13.1 | 10.6 | 21.7 | 89.1 | 87.1 | 86.9 | 89.4 | 78.3 |
| San Francisco | 47.6 | 16.6 | 14.8 | 21.1 | 19.9 | 52.4 | 83.4 | 85.2 | 78.9 | 80.1 |
| Denver | 24.4 | 8.1 | 16.5 | 19.2 | 27.9 | 75.6 | 91.9 | 83.5 | 80.8 | 72.1 |
| Average | 34.2% | 19.6% | 49.6% | 53.5% | 54.4% | 65.8% | 80.4% | 50.4% | 46.5% | 45.6% |
| Median | 8.6% | 5.1% | 20.7% | 21.3% | 26.2% | 87.8% | 94.9% | 79.3% | 78.7% | 73.8% |

## ACH Transactions Returned

Return items for ACH transactions were measured by the percent of items that were sent and the percent of items that were received. Return ACH items sent were defined as any ACH transactions returned to the originator because of an inability to post the transaction to an account or for which there was no prenotification on file. Return ACH transactions received were any ACH transactions that were originated by the banks surveyed but were returned by either the ACH or the intended receiver. The reasons for returning the item were not questioned.

The percent of ACH return items sent is shown by area in Table 4. The percent of debit return items sent increased dramatically (276.9%) from 1.3% in 1981 to 4.9% in 1982, while median debit returns sent increased from 1.7% to 2.7%. The percent of credit return items sent also increased substantially (50.0%) from 0.2% in 1981 to 0.3% in 1982. Median credit return items sent remained stable from the 1981 survey at 0.1%. Average percent of total return items sent, however, dropped 44.4% from 0.9% in 1981 to 0.5% in 1982. The median average percent of total return items increased from 1.0% in 1981 to 1.2% in 1982.

The percent of return items received is shown in Table 5, with two categories (average debit return items and average total return items) showing no increase over the 1981 survey. Average credit return items received increased 33.3% from 0.3% in 1981 to 0.4% in 1982. Median figures from the 1981 survey remained the same for credit return items received and total return items received, while debit return items received increased 50% from 0.1% in 1981 to 9.2% in 1982.

## ACH Debit Types

The percent of ACH debits sent by transaction type is shown in Table 6. Again, insurance premiums constituted the largest percentage of type of transaction sent (78.3%). Categories that experienced a decrease between the two survey periods were home mortgage (from 1.2% to 0.3%), telephone bill payments (from 0.8% to 0.4%), and corporate payments (from 19.1% to 11.8%). "Other" payments increased 76.9% from 5.2% to 9.2%.

The types of ACH debit transactions received by the responding banks are shown in Table 7. The "other" payments category increased 29.9% from 45.5% in 1981 to 59.1% in 1982, while all remaining categories experienced a decrease from the 1981 survey. The increase in the "other" category can be explained by the difficulty in classifying debits received. Specifically, for the remaining categories the following decreases were registered: insurance premiums 15.2% from 33.6% to 28.5%; home mortgages 50.0% from 3.6% to 1.8%; telephone bill payments 75.8% from 2.9% to 0.7%; and corporate payments 30.6% from 14.4% to 10.0%.

Table 4
Percent of ACH Items Returned of Items Sent by Area

| Area | Percent Debits[+] | | | | Percent Credits[±] | | | | Percent Total[§] | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 | 1979 | 1980 | 1981 | 1982 | 1979 | 1980 | 1981 | 1982 |
| Boston | 28.5% | 3.0% | 8.5% | 21.5% | 2.4% | 0.0% | 0.1% | 0.2% | 7.8% | 1.7% | 3.1% | 2.7% |
| New York | 0.0 | 8.9 | 4.1 | 27.0 | 0.1 | 0.0 | 2.6 | 1.1 | 0.3 | 5.9 | 18.2 | 22.6 |
| Philadelphia | 2.0 | 1.4 | 5.9 | 7.9 | 0.5 | 10.0 | 8.5 | 0.7 | 10.3 | 24.3 | 22.4 | 4.5 |
| Pittsburgh | 1.4 | 0.8 | 1.0 | 15.5 | 8.4 | 1.6 | 1.3 | 0.6 | 2.6 | 6.8 | 4.9 | 5.1 |
| Washington, D.C. | 20.7 | 12.3 | 35.5 | 18.0 | 0.2 | 0.1 | 0.4 | 1.0 | 2.8 | 1.7 | 4.4 | 8.8 |
| Atlanta | 1.4 | 57.8 | 15.8 | 8.8 | 0.6 | 0.5 | 0.8 | 1.0 | 1.0 | 5.5 | 5.3 | 7.4 |
| Chicago | 0.1 | 1.2 | 1.5 | 5.0 | 0.7 | 0.6 | 0.7 | 0.4 | 1.0 | 3.0 | 13.7 | 1.3 |
| Cleveland | 1.1 | 68.7 | 21.0 | 7.6 | 0.1 | 0.3 | 0.2 | 0.6 | 0.2 | 0.9 | 3.8 | 2.3 |
| Detroit | 13.6 | 26.8 | 3.5 | 2.2 | 0.0 | 3.6 | 0.0 | 16.9 | 7.6 | 9.6 | 3.0 | 2.2 |
| Minneapolis/St. Paul | * | * | 0.5 | 0.1 | * | * | 0.0 | 0.0 | * | * | 1.0 | 0.0 |
| St. Louis | 0.2 | 37.0 | 3.2 | 8.0 | 0.2 | 0.2 | 0.4 | 0.5 | 0.8 | 0.8 | 1.0 | 1.8 |
| Dallas | 0.0 | 0.5 | 1.4 | 6.7 | 0.0 | 1.3 | 0.1 | 3.1 | 0.1 | 1.1 | 2.0 | 5.9 |
| Houston | 0.0 | 0.7 | 3.6 | 57.0 | 0.1 | 16.9 | 8.2 | 0.1 | 0.1 | 1.1 | 3.9 | 6.7 |
| Los Angeles | 0.2 | 29.9 | 16.6 | 23.1 | 1.7 | 1.5 | 0.2 | 6.2 | 1.3 | 14.3 | 3.9 | 3.7 |
| San Francisco | 0.8 | 53.2 | 14.7 | 74.1 | 1.2 | 13.0 | 6.6 | 10.6 | 2.9 | 13.7 | 21.8 | 35.0 |
| Denver | 43.3 | 0.5 | 1.5 | 2.7 | 0.1 | 1.4 | 0.5 | 0.7 | 1.5 | 0.7 | 0.7 | 0.6 |
| Average | 0.8% | 0.5% | 1.3% | 4.9% | 0.1% | 0.2% | 0.2% | 0.3% | 0.3% | 0.6% | 0.9% | 0.5% |
| Median | 0.0% | 1.7% | 1.7% | 2.7% | 0.0% | 0.0% | 0.1% | 0.1% | 0.3% | 1.5% | 1.0% | 1.2% |

*No respondents; $^{+}\frac{Q7}{Q1} \times 100$; $^{\pm}\frac{Q9}{Q3} \times 100$; $^{\S}\frac{Q11}{Q5} \times 100$.

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Table 5
Percent of ACH Items Returned of Items Received by Area

| Area | Percent Debits[+] | | | | Percent Credits[±] | | | | Percent Total[§] | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 | 1979 | 1980 | 1981 | 1982 | 1979 | 1980 | 1981 | 1982 |
| Boston | 2.7% | 1.1% | 1.4% | 0.3% | 0.0% | 1.6% | 1.9% | 0.3% | 0.1% | 1.1% | 1.7% | 0.2% |
| New York | 1.7 | 1.1 | 0.5 | 0.7 | 0.0 | 2.2 | 0.4 | 1.5 | 0.7 | 1.1 | 0.4 | 0.8 |
| Philadelphia | 0.9 | 0.4 | 0.4 | 0.6 | 0.0 | 0.6 | 0.3 | 1.0 | 0.0 | 0.4 | 0.3 | 0.8 |
| Pittsburgh | 0.0 | 0.3 | 0.3 | 0.3 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.3 | 0.2 | 0.2 |
| Washington, D.C. | 3.3 | 0.4 | 0.8 | 1.3 | 0.0 | 0.2 | 0.3 | 0.2 | 0.2 | 0.3 | 0.5 | 0.8 |
| Atlanta | 6.2 | 1.1 | 1.4 | 1.5 | 0.1 | 0.1 | 0.8 | 0.3 | 0.3 | 0.6 | 1.2 | 1.0 |
| Chicago | 0.2 | 1.3 | 2.6 | 2.3 | 0.0 | 2.4 | 0.9 | 2.0 | 0.0 | 1.3 | 1.7 | 2.0 |
| Cleveland | 1.3 | 0.2 | 0.7 | 0.6 | 0.0 | 0.4 | 0.2 | 0.5 | 0.1 | 0.3 | 0.4 | 0.5 |
| Detroit | 0.8 | 0.4 | 0.3 | 0.3 | 0.0 | 0.4 | 0.1 | 0.1 | 0.2 | 0.4 | 0.4 | 0.2 |
| Minneapolis/St. Paul | * | * | 0.6 | 0.4 | * | * | 0.2 | 0.2 | * | * | 0.4 | 0.3 |
| St. Louis | 1.2 | 2.6 | 0.9 | 1.4 | 6.3 | 0.3 | 0.1 | 2.1 | 2.1 | 2.3 | 0.7 | 1.3 |
| Dallas | 0.0 | 0.7 | 0.3 | 3.8 | 0.0 | 1.6 | 0.2 | 0.1 | 0.0 | 0.8 | 0.3 | 1.3 |
| Houston | 0.7 | 0.3 | 0.2 | 0.2 | 0.5 | 3.6 | 0.6 | 0.0 | 0.4 | 0.6 | 0.3 | 0.1 |
| Los Angeles | 0.8 | 4.3 | 0.9 | 0.6 | 0.2 | 0.3 | 0.1 | 0.1 | 0.2 | 1.1 | 0.6 | 0.4 |
| San Francisco | 1.6 | 0.8 | 0.6 | 0.8 | 0.9 | 0.1 | 0.8 | 0.2 | 0.7 | 0.5 | 0.6 | 0.5 |
| Denver | 0.0 | 0.5 | 1.0 | 1.0 | 0.1 | 0.1 | 0.6 | 0.6 | 0.1 | 0.3 | 0.8 | 0.8 |
| Average | 0.9% | 0.5% | 0.7% | 0.7% | 0.0% | 0.2% | 0.3% | 0.4% | 0.1% | 0.4% | 0.5% | 0.5% |
| Median | 0.0% | 0.0% | 0.1% | 0.2% | 0.0% | 0.0% | 0.1% | 0.1% | 0.0% | 0.2% | 0.2% | 0.2% |

*No respondents; $\frac{+Q8}{Q2} \times 100$; $\frac{\pm Q10}{Q4} \times 100$; $\frac{\S\ Q12}{Q6} \times 100$.

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Table 6
Percent of ACH Debit Transactions Sent by Type of Transactions Area

| Area | Insurance Premium+ | | | | Home Mortgage± | | | |
|---|---|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 | 1979 | 1980 | 1981 | 1982 |
| Boston | 0.9% | 0.0% | 0.0% | 0.0% | 0.0% | 10.8% | 0.0% | 0.0% |
| New York | 100.0 | 49.8 | 32.8 | 13.2 | 0.0 | 0.0 | 0.1 | 0.0 |
| Philadelphia | 0.0 | * | 0.0 | 0.0 | 0.0 | * | 0.0 | 0.0 |
| Pittsburgh | 0.7 | * | 0.0 | 0.0 | 0.0 | * | 0.0 | 0.0 |
| Washington, D.C. | 0.0 | 18.3 | 27.7 | 11.5 | 56.5 | 25.2 | 21.6 | 2.8 |
| Atlanta | 34.3 | 5.8 | 10.0 | 15.2 | 16.4 | 12.3 | 0.2 | 6.9 |
| Chicago | 29.8 | 0.0 | 0.0 | 2.1 | 53.5 | 1.5 | 0.0 | 0.0 |
| Cleveland | 32.0 | 19.2 | 11.3 | 28.7 | 1.2 | 1.4 | 1.0 | 0.1 |
| Detroit | 0.0 | 14.7 | 20.7 | 0.0 | 0.6 | 0.2 | 0.3 | 0.1 |
| Minneapolis/St. Paul | * | * | 0.0 | 25.9 | * | * | 0.0 | 1.0 |
| St. Louis | 47.4 | 13.6 | 0.0 | 11.4 | 45.8 | 4.8 | 6.1 | 3.2 |
| Dallas | * | 0.0 | 0.0 | 0.0 | * | 0.0 | 0.0 | 0.0 |
| Houston | 0.0 | 0.0 | 33.3 | 1.2 | 0.0 | 25.0 | 19.6 | 10.0 |
| Los Angeles | 0.0 | * | 4.4 | 16.4 | 100.0 | * | 0.4 | 6.8 |
| San Francisco | 64.9 | 19.1 | 23.4 | 22.9 | 35.1 | 30.9 | 0.5 | 0.5 |
| Denver | 7.5 | 6.4 | 2.6 | 10.7 | 27.1 | 26.9 | 20.9 | 12.9 |
| Average | 65.4% | 77.8% | 73.7% | 78.3% | 14.5% | 1.7% | 1.2% | 0.3% |
| Median | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |

*No respondents; $+\frac{Q13}{Q23} \times 100$; $\pm\frac{Q15}{Q23} \times 100$; $\S\ \frac{Q17}{Q23} \times 100$; $II\ \frac{Q19}{Q23} \times 100$; $\#\frac{Q21}{Q23} \times 100$.

Note: The preceding footnote also pertains to the continuation of Table 6 on the following page.

Table 6 (continued)

| Area | Telephone Bill Payment§ | | | | Corporate Payment II | | | |
|---|---|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 | 1979 | 1980 | 1981 | 1982 |
| Boston | 0.0% | 0.0% | 0.0% | 0.0% | 48.0% | 32.5 | 59.2% | 69.9% |
| New York | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 50.2 | 33.8 | 49.7 |
| Philadelphia | 0.0 | * | 1.1 | 7.5 | 0.0 | * | 66.7 | 38.5 |
| Pittsburgh | 0.0 | * | 0.0 | 0.0 | 99.3 | * | 100.0 | 49.7 |
| Washington, D.C. | 0.0 | 0.1 | 0.0 | 16.7 | 0.0 | 3.1 | 14.3 | 29.3 |
| Atlanta | 4.9 | 7.1 | 14.5 | 4.8 | 14.1 | 20.6 | 55.1 | 17.2 |
| Chicago | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 64.8 | 60.7 | 47.5 |
| Cleveland | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 42.6 | 69.6 | 43.3 |
| Detroit | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 28.1 | 44.9 | 38.0 |
| Minneapolis/St. Paul | * | * | 4.4 | 0.1 | * | * | 65.4 | 24.7 |
| St. Louis | 0.0 | 14.0 | 6.7 | 0.0 | 2.6 | 56.2 | 81.2 | 52.9 |
| Dallas | * | 0.0 | 0.0 | 0.0 | * | 66.6 | 50.0 | 47.4 |
| Houston | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 25.0 | 47.0 | 25.5 |
| Los Angeles | 0.0 | * | 0.0 | 0.0 | 0.0 | * | 0.0 | 13.2 |
| San Francisco | 0.0 | 25.0 | 0.1 | 0.0 | 0.0 | 0.0 | 75.0 | 20.8 |
| Denver | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 33.3 | 16.6 | 43.5 |
| Average | 2.2% | 1.0% | 0.8% | 0.4% | 10.0% | 8.1% | 19.1% | 11.8% |
| Median | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.3% | 59.3% | 15.5% |

Table 6 (continued)

| Area | Other Payments # | | | |
|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 |
| Boston | 51.1% | 56.7% | 40.8% | 30.1% |
| New York | 0.0 | 0.0 | 33.3 | 37.0 |
| Philadelphia | 100.0 | * | 32.2 | 54.0 |
| Pittsburgh | 0.1 | * | 0.0 | 50.3 |
| Washington, D.C. | 43.5 | 53.4 | 36.3 | 39.8 |
| Atlanta | 30.3 | 54.2 | 20.2 | 55.9 |
| Chicago | 16.7 | 33.7 | 39.3 | 50.4 |
| Cleveland | 21.6 | 36.8 | 18.1 | 27.8 |
| Detroit | 99.4 | 57.0 | 34.1 | 61.9 |
| Minneapolis/St. Paul | * | * | 30.2 | 48.4 |
| St. Louis | 4.2 | 11.5 | 6.0 | 32.5 |
| Dallas | * | 33.4 | 50.0 | 52.6 |
| Houston | 100.0 | 50.0 | 0.1 | 63.2 |
| Los Angeles | 0.0 | * | 95.2 | 63.6 |
| San Francisco | 0.0 | 25.0 | 1.0 | 55.8 |
| Denver | 65.4 | 33.3 | 60.0 | 33.0 |
| Average | 7.9% | 11.4% | 5.2% | 9.2% |
| Median | 6.3% | 13.8% | 0.4% | 36.2% |

Table 7

Percent of ACH Debit Transactions Received by Type of Transaction by Area

| Area | Insurance Premium+ | | | | Home Mortgage± | | | |
|---|---|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 | 1979 | 1980 | 1981 | 1982 |
| Boston | 71.0% | 61.8% | 53.8% | 26.8% | 0.8% | 0.0% | 0.0% | 2.4% |
| New York | 65.0 | 74.4 | 82.4 | 64.6 | 8.1 | 0.0 | 0.5 | 0.0 |
| Philadelphia | 43.1 | 70.5 | 61.4 | 54.7 | 0.0 | 0.3 | 0.1 | 0.1 |
| Pittsburgh | 23.5 | 44.0 | 54.0 | 42.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Washington, D.C. | 42.3 | 23.7 | 58.5 | 35.8 | 2.1 | 5.8 | 14.1 | 2.2 |
| Atlanta | 43.0 | 54.6 | 50.4 | 37.2 | 4.9 | 0.9 | 7.1 | 3.7 |
| Chicago | 74.4 | 76.6 | 68.4 | 44.5 | 5.0 | 4.8 | 0.0 | 1.9 |
| Cleveland | 34.8 | 49.9 | 59.8 | 44.6 | 19.1 | 5.0 | 4.0 | 2.2 |
| Detroit | 55.7 | 53.1 | 42.3 | 54.7 | 0.1 | 0.2 | 1.0 | 0.7 |
| Minneapolis/St. Paul | * | * | 43.7 | 33.0 | * | * | 0.3 | 2.2 |
| St. Louis | 33.6 | 34.8 | 37.9 | 38.0 | 15.0 | 7.0 | 4.2 | 3.5 |
| Dallas | 85.7 | 39.4 | 22.7 | 50.1 | 0.2 | 5.0 | 4.0 | 5.4 |
| Houston | 49.4 | 43.2 | 38.1 | 30.0 | 0.2 | 1.8 | 0.9 | 0.9 |
| Los Angeles | 45.3 | 62.1 | 61.3 | 50.5 | 2.2 | 2.5 | 2.0 | 0.4 |
| San Francisco | 18.2 | 41.1 | 31.6 | 41.9 | 6.0 | 1.0 | 1.3 | 2.0 |
| Denver | 15.3 | 8.2 | 30.0 | 42.9 | 3.3 | 0.4 | 3.4 | 2.1 |
| Average | 31.1% | 31.7% | 33.6% | 28.5% | 9.0% | 2.2% | 3.6% | 1.8% |
| Median | 51.0% | 62.9% | 60.8% | 48.2% | 0.0% | 0.0% | 0.1% | 0.1% |

*No respondents; $\frac{+Q14}{Q24} \times 100$; $\frac{\pm Q16}{Q24} \times 100$; $\frac{\S Q18}{Q24} \times 100$; $\frac{II\ Q20}{Q24} \times 100$; $\frac{\#Q22}{Q24} \times 100$.

Note: The preceding footnote also pertains to the continuation of Table 7 on the following page.

Table 7 (continued)

| Area | Telephone Bill Payment§ | | | | Corporate Payment II | | | |
|---|---|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 | 1979 | 1980 | 1981 | 1982 |
| Boston | 0.2% | 0.1% | 0.0% | 5.2% | 3.5% | 7.7% | 14.6% | 23.4% |
| New York | 1.3 | 0.1 | 0.1 | 0.0 | 24.4 | 19.8 | 12.2 | 17.7 |
| Philadelphia | 9.1 | 0.0 | 6.1 | 0.1 | 22.7 | 15.2 | 16.9 | 24.3 |
| Pittsburgh | 0.0 | 0.0 | 0.0 | 0.0 | 76.5 | 18.5 | 45.9 | 11.9 |
| Washington, D.C. | 0.0 | 2.7 | 0.0 | 0.0 | 19.1 | 5.5 | 4.1 | 11. |
| Atlanta | 8.3 | 1.4 | 1.7 | 0.7 | 9.1 | 11.3 | 9.6 | 8.7 |
| Chicago | 0.0 | 3.8 | 0.7 | 0.4 | 12.0 | 9.6 | 17.8 | 14.7 |
| Cleveland | 2.2 | 1.2 | 0.4 | 0.1 | 9.4 | 21.5 | 20.3 | 17.3 |
| Detroit | 0.0 | 0.0 | 0.0 | 0.2 | 8.7 | 11.5 | 18.0 | 21.3 |
| Minneapolis/St. Paul | * | * | 28.1 | 7.7 | * | * | 17.6 | 15.6 |
| St. Louis | 0.3 | 3.2 | 6.9 | 0.6 | 14.7 | 15.6 | 17.2 | 30.1 |
| Dallas | 2.9 | 0.0 | 0.0 | 0.0 | 2.6 | 6.9 | 26.8 | 21.2 |
| Houston | 0.8 | 0.0 | 5.2 | 0.0 | 12.9 | 4.6 | 17.1 | 4.6 |
| Los Angeles | 0.0 | 0.0 | 0.0 | 0.0 | 20.1 | 25.1 | 16.1 | 11.9 |
| San Francisco | 0.9 | 0.2 | 0.3 | 1.6 | 13.9 | 8.6 | 39.3 | 10.2 |
| Denver | 26.7 | 0.0 | 1.1 | 0.0 | 5.0 | 1.9 | 3.0 | 20.7 |
| Average | 2.6% | 4.3% | 2.9% | 0.7% | 15.6% | 7.2% | 14.4% | 10.0% |
| Median | 0.0% | 0.0% | 0.0% | 0.0% | 2.1% | 8.8% | 13.0% | 13.9% |

Table 7 (continued)

| Area | Other Payments # | | | |
|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 |
| Boston | 24.5% | 30.4% | 31.6% | 42.2% |
| New York | 1.2 | 5.7 | 4.7 | 17.7 |
| Philadelphia | 20.5 | 14.0 | 15.4 | 20.9 |
| Pittsburgh | 0.0 | 37.5 | 0.1 | 45.9 |
| Washington, D.C. | 36.5 | 62.3 | 23.3 | 50.1 |
| Atlanta | 34.7 | 31.7 | 31.2 | 49.6 |
| Chicago | 12.9 | 5.2 | 13.1 | 38.6 |
| Cleveland | 34.5 | 22.3 | 15.5 | 35.8 |
| Detroit | 35.5 | 35.2 | 38.6 | 23.1 |
| Minneapolis/St. Paul | * | * | 10.3 | 41.4 |
| St. Louis | 36.4 | 39.5 | 33.9 | 27.7 |
| Dallas | 8.6 | 48.7 | 46.6 | 23.2 |
| Houston | 36.7 | 50.4 | 38.7 | 64.5 |
| Los Angeles | 32.5 | 10.4 | 20.6 | 37.2 |
| San Francisco | 61.0 | 49.1 | 27.4 | 44.3 |
| Denver | 49.8 | 89.5 | 62.5 | 34.3 |
| Average | 41.5% | 54.6% | 45.5% | 59.1% |
| Median | 14.5% | 14.2% | 12.5% | 27.2% |

During the past several years there has been an enormous growth in the number of financial institutions participating in networks. To reflect the increased interest financial institutions have in sharing arrangements, the EFT survey provides information on ATM transaction mix, average dollar variables, and transaction volume for both proprietary and interchange transactions. The statistical information on interchange transactions can provide guidelines for institutions that wish to compare their own interchange program experience with that of similar institutions.

Another addition to the 1982 EFT survey is detailed information on current ATM sites and future installation plans. This section of the survey has been expanded from three categories (main office, branch office, and off-premise) to 15 categories, such as main office—lobby and branch office—vestibule. With the additional information, represented as percentages, trends in future ATM installations can be observed.

## Transaction Mix

Cash withdrawals remain the most frequently used ATM transaction, constituting 61.2% of all proprietary transactions (52.5% from checking, 8.0% from savings and 0.7% from credit cards) and 71.8% of all interchange transactions (58.3% from checking, 12.3% from savings and 1.2% from credit cards). As shown in Table 8, the area with the highest percentage of cash withdrawals from checking for proprietary transactions was Minneapolis/St. Paul (68.9%), while San Francisco experienced a 79.3% rate for interchange transactions.

Consistent with previous studies, balance inquiries were the second most widely used type of transaction, comprising 23.3% of all proprietary transactions and 15.8% of all interchange transactions. The areas with the highest usage rate of balance inquiries for proprietary/interchange were New York (34.4%) and Washington, D.C. (35.6%), respectively.

Deposits accounted for 12.1% of all proprietary transactions (10.8% to checking and 1.3% to savings) and 9.3% of all interchange transactions (8.2% to checking and 1.1% to savings).

Table 8

Percent of ATM Transactions by Type by Area

| Area | Cash Withdrawals from Checking+ | | | | Cash Withdrawals from Savings± | | | |
|---|---|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 | 1979 | 1980 | 1981 | 1982 |
| Boston | 59.8% | 61.0% | 48.5% | 59.8/100.0% | 8.5% | 8.2 | 16.6% | 9.3/0.00% |
| New York | 66.2 | 47.5 | 33.5 | 41.9/51.0 | 3.2 | 9.0 | 9.0 | 8.9/6.70 |
| Philadelphia | 58.9 | 55.1 | 49.5 | 45.5/54.1 | 10.0 | 10.2 | 12.2 | 12.3/13.2 |
| Pittsburgh | 55.2 | 59.2 | 52.1 | 51.5/0.0 | 10.0 | 9.9 | 7.5 | 9.8/ 0.0 |
| Washington, D.C. | 59.3 | 58.9 | 59.9 | 50.5/56.5 | 5.5 | 7.6 | 4.7 | 6.9/ 7.9 |
| Atlanta | 52.8 | 51.5 | 54.8 | 55.1/62.2 | 4.6 | 5.4 | 5.6 | 6.0/ 8.1 |
| Chicago | 49.6 | 54.6 | 53.9 | 56.8/65.3 | 9.9 | 10.1 | 8.7 | 8.0/ 9.1 |
| Cleveland | 51.4 | 50.4 | 48.1 | 47.7/54.2 | 10.6 | 12.2 | 12.2 | 12.8/20.4 |
| Detroit | 55.7 | 45.0 | 46.0 | 44.8/41.5 | 10.3 | 14.4 | 14.7 | 16.3/28.2 |
| Minneapolis/St. Paul | * | * | 77.3 | 68.9/97.2 | * | * | 4.9 | 6.6/ 0.1 |
| St. Louis | 53.5 | 55.2 | 52.4 | 52.0/79.2 | 8.1 | 7.4 | 6.3 | 6.1/ 4.9 |
| Dallas | 50.9 | 49.9 | 60.2 | 49.5/62.5 | 3.2 | 4.5 | 2.8 | 2.4/ 6.6 |
| Houston | 45.4 | 60.6 | 57.8 | 58.1/66.1 | 4.3 | 7.8 | 3.9 | 4.3/ 5.9 |
| Los Angeles | 51.1 | 50.4 | 59.0 | 57.0/59.6 | 4.6 | 4.9 | 4.3 | 5.3/12.8 |
| San Francisco | 52.5 | 64.6 | 60.3 | 62.8/79.3 | 18.5 | 9.8 | 6.8 | 4.8/ 6.8 |
| Denver | 55.9 | 61.5 | 59.7 | 64.5/57.3 | 4.5 | 3.7 | 5.4 | 4.0/ 4.9 |
| Average | 51.1% | 52.2% | 45.5% | 52.50%/58.3 | 7.7% | 8.3% | 8.1% | 8.0%/12.3 |
| Median | 53.3% | 53.4% | 54.2% | 52.90%/61.0 | 5.9% | 7.5% | 6.9% | 6.2%/ 4.8 |

*No respondents; $+\frac{Q25/Q41}{Q34/Q50} \times 100$; $\pm\frac{Q26/Q42}{Q34/Q50} \times 100$; $\S\frac{Q27/Q43}{Q34/Q50} \times 100$; $^{\circ}\frac{Q28/Q44}{Q34/Q50} \times 100$;

**No comparable data collected; $\#\frac{Q29/Q45}{Q34/Q50} \times 100$; $++\frac{Q30/Q46}{Q34/Q50} \times 100$; $\S\S\frac{Q31/Q47}{Q34/Q50} \times 100$;

$^{\circ\circ}\frac{Q32/Q48}{Q34/Q50} \times 100$; $\#\#\frac{Q33/Q49}{Q34/Q50} \times 100$.

Note: The preceding footnotes also pertain to the continuation of Table 8 on the following pages.

Table 8 (continued)

| Area | Cash Withdrawals From Credit Cards§ | | | | Balance Inquiries° | | | |
|---|---|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 | 1979 | 1980 | 1981 | 1982 |
| Boston | 1.4% | 0.5% | 0.2% | 0.4/ 0.0% | 7.8% | 18.1% | 21.0% | 18.2/ 0.0% |
| New York | 8.5 | 4.0 | 0.5 | 0.7/16.7 | 13.0 | 28.8 | 42.4 | 34.4/25.7 |
| Philadelphia | 1.2 | 1.0 | 0.8 | 0.5/ 1.0 | 7.2 | 13.3 | 17.9 | 20.9/13.0 |
| Pittsburgh | 2.5 | 2.0 | 1.1 | 1.0/ 0.0 | 13.0 | 16.9 | 23.2 | 21.9/ 0.0 |
| Washington, D.C. | 2.3 | 1.5 | 0.9 | 2.0/ 0.0 | 12.2 | 13.7 | 17.3 | 27.6/35.6 |
| Atlanta | 3.4 | 1.4 | 0.7 | 0.8/ 0.2 | 23.6 | 22.5 | 24.0 | 24.8/24.5 |
| Chicago | 1.0 | 1.5 | 1.0 | 0.5/ 0.6 | 14.2 | 14.2 | 15.3 | 12.6/ 7.1 |
| Cleveland | 2.8 | 1.8 | 1.5 | 1.4/ 1.1 | 13.6 | 17.3 | 19.3 | 21.2/ 6.8 |
| Detroit | 9.4 | 9.5 | 6.6 | 6.4/ 0.2 | 9.5 | 15.9 | 12.4 | 15.5/ 7.0 |
| Minneapolis/St. Paul | * | * | 0.6 | 0.3/ 2.0 | * | * | 4.9 | 10.2/ 0.0 |
| St. Louis | 1.6 | 1.3 | 1.0 | 0.9/ 0.1 | 17.2 | 20.0 | 22.1 | 26.7/10.0 |
| Dallas | 4.2 | 0.6 | 0.1 | 0.1/ 0.1 | 28.2 | 30.8 | 23.9 | 29.7/21.9 |
| Houston | 10.9 | 0.4 | 0.1 | 0.1/ 0.0 | 19.1 | 18.2 | 28.5 | 28.3/24.3 |
| Los Angeles | 6.5 | 0.9 | 0.8 | 0.8/ 2.1 | 17.6 | 19.8 | 18.6 | 20.2/14.3 |
| San Francisco | 1.3 | 0.5 | 1.0 | 0.5/ 2.1 | 11.0 | 8.4 | 15.6 | 16.9/ 2.9 |
| Denver | 5.5 | 2.8 | 1.0 | 1.3/ 4.8 | 16.8 | 17.4 | 18.1 | 18.5/21.3 |
| Average | 2.3% | 1.1% | 0.6% | 0.7/ 1.2% | 20.4% | 19.1% | 26.5% | 23.3/15.8% |
| Median | 1.3% | 0.7% | 0.3% | 0.4/ 0.0% | 15.6% | 18.7% | 22.6% | 22.9/11.3% |

Table 8 (continued)

| | Transfers# | | | | Checking Deposits++ | | | |
|---|---|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1982 | 1982 | 1979 | 1980 | 1981 | 1982 |
| Boston | 3.0% | 1.6% | 1.6% | 2.3%/0.0% | 10.8% | 8.5% | 6.9% | 8.8/ 0.0% |
| New York | 1.6 | 1.2 | 2.2 | 1.7/0.0 | 6.2 | 7.3 | 7.0 | 10.3/ 0.0 |
| Philadelphia | 3.5 | 2.4 | 2.5 | 2.3/4.3 | 16.0 | 13.7 | 12.7 | 13.1/11.9 |
| Pittsburgh | 2.1 | 1.8 | 1.4 | 1.9/0.0 | 12.7 | 9.0 | 10.7 | 11.7/ 0.0 |
| Washington, D.C. | 3.5 | 2.7 | 1.5 | 1.6/0.0 | 13.9 | 11.5 | 13.7 | 9.9/ 0.0 |
| Atlanta | 2.0 | 4.6 | 1.5 | 1.6/0.5 | 10.6 | 9.7 | 8.0 | 9.1/ 4.0 |
| Chicago | 5.9 | 4.9 | 2.4 | 8.6/1.5 | 10.9 | 10.6 | 16.1 | 11.9/13.5 |
| Cleveland | 3.7 | 2.6 | 2.5 | 2.5/2.5 | 13.9 | 12.0 | 10.0 | 10.4/13.2 |
| Detroit | 3.3 | 3.5 | 2.9 | 3.0/2.7 | 9.6 | 8.3 | 12.2 | 10.3/14.1 |
| Minneapolis/St. Paul | * | * | 2.9 | 2.4/0.0 | * | * | 7.0 | 10.6/ 0.6 |
| St. Louis | 3.7 | 3.3 | 2.2 | 2.3/1.0 | 11.7 | 10.4 | 9.0 | 9.4/ 4.5 |
| Dallas | 2.2 | 1.8 | 1.5 | 0.8/0.9 | 10.1 | 10.0 | 10.8 | 8.6/ 5.4 |
| Houston | 2.0 | 1.2 | 1.0 | 1.0/0.6 | 8.1 | 10.7 | 8.1 | 7.1/ 2.8 |
| Los Angeles | 2.9 | 1.5 | 1.2 | 1.4/0.8 | 14.2 | 20.2 | 14.1 | 12.8/ 9.4 |
| San Francisco | 2.1 | 2.4 | 2.0 | 1.7/0.7 | 13.5 | 12.8 | 12.3 | 12.4/12.8 |
| Denver | 2.4 | 1.7 | 2.7 | 1.9/1.2 | 11.5 | 9.9 | 11.7 | 9.1/ 9.7 |
| Average | 2.8% | 2.3% | 2.2% | 2.2%/1.3% | 11.9% | 13.6% | 10.5% | 10.8%/8.2% |
| Median | 2.7% | 2.2% | 1.9% | 1.8%/1.0% | 11.9% | 10.0% | 9.6% | 10.0%/7.1% |

Table 8 (continued)

| Area | Savings Deposits§§ | | | | Bill Payments°° | | | |
|---|---|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 | 1979** | 1980** | 1981 | 1982 |
| Boston | 1.8% | 1.7% | 3.1% | 0.9/0.0% | | | 0.3% | 0.1/0.0% |
| New York | 0.4 | 1.5 | 1.9 | 1.9/0.0 | | | 0.9 | 0.9/0.0 |
| Philadelphia | 2.1 | 1.7 | 2.0 | 2.4/1.6 | | | 0.9 | 0.6/0.3 |
| Pittsburgh | 1.2 | 1.0 | 0.9 | 1.4/0.0 | | | 0.4 | 0.3/0.0 |
| Washington, D.C. | 1.4 | 1.0 | 0.6 | 0.6/0.0 | | | 1.4 | 0.7/0.0 |
| Atlanta | 0.5 | 1.1 | 0.5 | 0.6/0.4 | | | 0.2 | 0.2/0.0 |
| Chicago | 1.5 | 1.8 | 1.6 | 1.3/1.3 | | | 0.4 | 1.3/0.1 |
| Cleveland | 1.4 | 1.8 | 1.7 | 1.7/1.7 | | | 1.6 | 1.2/0.0 |
| Detroit | 1.1 | 1.6 | 1.8 | 2.3/3.2 | | | 1.3 | 1.3/0.3 |
| Minneapolis/St. Paul | * | * | 0.4 | 0.8/0.0 | | | 0.1 | 0.2/0.0 |
| St. Louis | 1.0 | 0.9 | 0.7 | 1.7/0.2 | | | 0.3 | 0.3/0.0 |
| Dallas | 0.5 | 0.9 | 0.4 | 0.3/0.2 | | | 0.3 | 0.4/0.0 |
| Houston | 0.4 | 0.8 | 0.4 | 0.3/0.2 | | | 0.1 | 0.1/0.1 |
| Los Angeles | 0.6 | 0.5 | 0.8 | 0.8/0.9 | | | 0.5 | 0.5/0.0 |
| San Francisco | 0.4 | 1.1 | 0.9 | 0.6/0.0 | | | 0.3 | 0.3/1.2 |
| Denver | 0.4 | 0.4 | 1.2 | 0.4/0.5 | | | 0.0 | 0.2/0.2 |
| Average | 1.0% | 1.4% | 1.5% | 1.3%/1.1% | | | 0.5% | 0.5%/0.1% |
| Median | 0.8% | 0.9% | 0.8% | 0.8%/0.1% | | | 0.3% | 0.3%/0.0% |

Table 8 (continued)

| Area | Other ATM Transactions | | | |
|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 |
| Boston | 6.7% | 0.5% | 1.6% | 0.0/0.0% |
| New York | 0.8 | 0.6 | 2.7 | 0.3/0.0 |
| Philadelphia | 1.2 | 2.7 | 1.4 | 2.3/0.5 |
| Pittsburgh | 3.3 | 0.3 | 2.5 | 0.4/0.0 |
| Washington, D.C. | 1.9 | 3.1 | 0.1 | 0.2/0.0 |
| Atlanta | 2.5 | 3.8 | 4.7 | 1.6/0.0 |
| Chicago | 7.1 | 2.4 | 0.5 | 0.4/1.6 |
| Cleveland | 2.5 | 2.0 | 3.1 | 1.0/0.0 |
| Detroit | 1.1 | 1.8 | 2.0 | 2.7/6.0 |
| Minneapolis/St. Paul | * | * | 2.0 | 0.0/0.0 |
| St. Louis | 3.0 | 1.4 | 6.0 | 0.7/0.1 |
| Dallas | 0.7 | 1.6 | 0.0 | 8.3/2.5 |
| Houston | 9.9 | 0.3 | 0.0 | 0.7/0.0 |
| Los Angeles | 2.6 | 1.8 | 0.7 | 1.3/0.0 |
| San Francisco | 0.7 | 0.4 | 0.8 | 0.0/0.1 |
| Denver | 3.0 | 2.6 | 0.2 | 0.0/0.0 |
| Average | 2.8% | 2.0 | 4.6 | 1.3/1.8% |
| Median | 0.8% | 0.5% | 0.0% | 0.0/0.0% |

## Dollar Value of ATM Transactions

In almost all cases, the average dollar value of ATM transactions was higher for proprietary transactions than for interchange transactions. As shown in Table 9, the one exception was cash withdrawals from checking where the average value was $41 for a proprietary transaction and $45 for an interchange transaction.

For proprietary transactions, the average cash withdrawal from savings was $63, the average cash withdrawal from a credit card was $55, the average checking deposit was $397, the average savings deposit was $301, and the average bill payment was $188.

For interchange transactions, the average cash withdrawal from savings was $51, the average cash withdrawal from a credit card was $50, the average checking deposit was $375, the average savings deposit was $278, and the average bill payment was $171.

Table 9

Average Dollar Value of ATM Transactions by Area

| Area | Cash Withdrawals from Checking+ | | | | Cash Withdrawals from Savings± | | | |
|---|---|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 | 1979 | 1980 | 1981 | 1982 |
| Boston | $34 | $38 | $42 | $43/40 | $46 | $35 | $43 | $41/ 0 |
| New York | 44 | 47 | 55 | 50/46 | 35 | 45 | 54 | 57/30 |
| Philadelphia | 40 | 42 | 47 | 59/55 | 57 | 48 | 50 | 60/60 |
| Pittsburgh | 38 | 37 | 40 | 43/0 | 41 | 38 | 42 | 44/ 0 |
| Washington, D.C. | 36 | 36 | 43 | 43/38 | 48 | 45 | 44 | 44/42 |
| Atlanta | 34 | 35 | 57 | 35/30 | 41 | 36 | 52 | 39/39 |
| Chicago | 40 | 39 | 39 | 47/52 | 60 | 53 | 52 | 56/53 |
| Cleveland | 39 | 35 | 36 | 39/38 | 39 | 36 | 37 | 35/36 |
| Detroit | 40 | 43 | 39 | 43/48 | 47 | 46 | 43 | 47/47 |
| Minneapolis/St. Paul | * | * | 52 | 31/29 | * | * | 55 | 32/29 |
| St. Louis | 37 | 38 | 34 | 38/37 | 43 | 53 | 43 | 47/39 |
| Dallas | 31 | 35 | 40 | 46/44 | 40 | 68 | 49 | 88/50 |
| Houston | 38 | 38 | 39 | 40/33 | 42 | 38 | 49 | 49/40 |
| Los Angeles | 39 | 40 | 43 | 45/39 | 46 | 55 | 53 | 52/34 |
| San Francisco | 37 | 44 | 46 | 55/58 | 34 | 41 | 52 | 64/82 |
| Denver | 35 | 29 | 38 | 37/38 | 44 | 39 | 45 | 41/38 |
| Average | $36 | $39 | $48 | $41/$45 | $38 | $44 | $47 | $63/$51 |
| Median | $37 | $38 | $40 | $42/$40 | $42 | $43 | $45 | $46/$42 |

*No respondents; +Q35/Q51 / Q25/Q41; ±Q36/Q52 / Q26/Q42; §Q37/Q53 / Q27/Q43; °Q38/Q54 / Q30/Q43; #Q39/Q55 / Q31/Q47;

**No comparable data collected; ±±Q40/Q56 / Q32/Q48.

Note: The preceding footnotes also pertain to the continuation of Table 9 on the following pages.

Table 9 (continued)

| Area | Cash Withdrawals from Credit Cards§ | | | | Checking Deposits° | | | |
|---|---|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 | 1979 | 1980 | 1981 | 1982 |
| Boston | $31 | $39 | $47 | $51/30 | $265 | $348 | $322 | $335/0 |
| New York | 44 | 44 | 63 | 59/30 | 278 | 312 | 329 | 276/0 |
| Philadelphia | 68 | 58 | 51 | 58/48 | 237 | 329 | 303 | 408/408 |
| Pittsburgh | 43 | 51 | 47 | 51/0 | 276 | 283 | 299 | 306/0 |
| Washington, D.C. | 53 | 48 | 56 | 57/0 | 324 | 303 | 366 | 372/0 |
| Atlanta | 43 | 91 | 49 | 47/41 | 298 | 258 | 279 | 359/395 |
| Chicago | 45 | 43 | 51 | 68/47 | 332 | 361 | 500 | 545/385 |
| Cleveland | 43 | 40 | 40 | 45/35 | 297 | 272 | 295 | 340/315 |
| Detroit | 45 | 45 | 38 | 44/78 | 332 | 311 | 561 | 322/240 |
| Minneapolis/St. Paul | * | * | 42 | 50/0 | * | * | 627 | 358/354 |
| St. Louis | 53 | 55 | 62 | 79/10 | 293 | 299 | 279 | 308/408 |
| Dallas | 53 | 58 | 61 | 0/69 | 272 | 358 | 354 | 458/480 |
| Houston | 40 | 56 | 61 | 62/50 | 438 | 278 | 343 | 321/330 |
| Los Angeles | 45 | 46 | 42 | 54/44 | 348 | 290 | 334 | 371/475 |
| San Francisco | 43 | 51 | 67 | 52/34 | 346 | 317 | 356 | 370/534 |
| Denver | 62 | 46 | 69 | 63/46 | 295 | 373 | 392 | 399/387 |
| Average | $47 | $58 | $54 | $55/$50 | $309 | $281 | $362 | $397/$375 |
| Median | $43 | $46 | $48 | $52/$42 | $313 | $289 | $323 | $345/$382 |

Table 9 (continued)

| Area | Savings Deposits# | | | | Bill Payment±± | | | |
|---|---|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 | 1979** | 1980** | 1981 | 1982 |
| Boston | $988 | $229 | $248 | $232/0 | | | $257 | $169/0 |
| New York | 258 | 212 | 258 | 218/0 | | | 145 | 172/0 |
| Philadelphia | 327 | 267 | 261 | 259/258 | | | 838 | 440/83 |
| Pittsburgh | 237 | 244 | 215 | 240/0 | | | 624 | 173/0 |
| Washington, D.C. | 328 | 613 | 276 | 326/0 | | | 132 | 113/0 |
| Atlanta | 235 | 341 | 283 | 415/230 | | | 153 | 146/120 |
| Chicago | 303 | 391 | 367 | 424/258 | | | 220 | 181/100 |
| Cleveland | 250 | 237 | 234 | 184/227 | | | 109 | 121/0 |
| Detroit | 363 | 357 | 249 | 253/224 | | | 115 | 159/197 |
| Minneapolis/St. Paul | * | * | 294 | 168/702 | | | 517 | 230/0 |
| St. Louis | 423 | 291 | 233 | 262/307 | | | 109 | 106/227 |
| Dallas | 519 | 264 | 281 | 170/394 | | | 104 | 119/113 |
| Houston | 403 | 287 | 214 | 223/141 | | | 106 | 140/115 |
| Los Angeles | 346 | 376 | 334 | 350/335 | | | 133 | 197/0 |
| San Francisco | 290 | 368 | 329 | 328/0 | | | 171 | 144/171 |
| Denver | 308 | 257 | 445 | 301/186 | | | * | 257/233 |
| Average | $285 | $313 | $301 | $301/$278 | | | $155 | $188/$171 |
| Median | $271 | $279 | $256 | $256/$237 | | | $137 | $142/$143 |

## Weekly ATM Transactions

Average weekly transaction volume per ATM decreased 34.5% from 1,646.1 in 1981 to 1,078.3 in 1982 (958.8 proprietary transactions and 119.5 interchange transactions). Lower transaction volumes were experienced in all types of transaction categories except for cash withdrawals from credit cards which increased 31.6% from 9.8 transactions per week to 12.9 transactions. Only five areas reported an increase in weekly transaction volume between the 1981 and 1982 surveys: Chicago from 945.2 transactions to 1244.1, Detroit from 683.4 transactions to 1,154.3, Minneapolis/St. Paul from 752.8 transactions to 1,132.2, Dallas from 1,245 transactions to 1,676.1, and Houston from 938.1 transactions to 1,092.7.

1982 Total Dollar Value of Proprietary ATM Activity

| Transaction Type | Withdrawals | Deposits | Net |
|---|---|---|---|
| Checking | $22,201.50 | $41,049.80 | $18,848.30 |
| Savings | 4,876.20 | 3,341.10 | 1,535.10 |
| Credit card | 605.00 | 0.00 | (605.00) |
| Total | $27,682.70 | $44,390.90 | $19,778.40 |

ATMs have been considered as net deposit takers. By multiplying the average dollar amounts by the average transaction volumes for proprietary transactions (Table 9 x Table 10), the dollars deposited to dollars withdrawn ratio can be calculated. In the 1981 study, the dollars deposited to dollars withdrawn ratio was 1.6:1 and remained the same for 1982.

Table 11 shows the number of weekly transactions per ATM categorized by terminal location. ATM locations reporting the highest transaction volumes include main office vestibule (1,491), branch office through-the-wall (1,324), and off-premise university/college (1,736). The transaction volumes are slightly different than in Table 10 because of the number of institutions that were unable to report the transaction volume by terminal location.

Table 10

Average Weekly Transactions per ATM Unit by Area

| Area | Cash Withdrawals from Checking+ | | | | Cash Withdrawals from Savings± | | | |
|---|---|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 | 1979 | 1980 | 1981 | 1982 |
| Boston | 333.2 | 369.8 | 496.9 | 598.4/118.4 | 47.1 | 65.7 | 153.2 | 93.4/ 0.0 |
| New York | 318.4 | 424.2 | 465.0 | 418.8/ 0.3 | 16.4 | 85.9 | 176.1 | 88.5/ 0.0 |
| Philadelphia | 381.5 | 476.3 | 576.7 | 455.4/120.3 | 75.9 | 119.4 | 154.8 | 123.3/44.3 |
| Pittsburgh | 564.1 | 759.2 | 733.7 | 514.9/ 0.0 | 97.3 | 105.8 | 105.2 | 98.0/ 0.0 |
| Washington, D.C. | 669.0 | 695.7 | 467.6 | 504.8/ 15.8 | 61.5 | 92.7 | 38.6 | 69.1/ 2.2 |
| Atlanta | 797.0 | 701.6 | 1,139.7 | 551.5/ 32.7 | 73.8 | 64.2 | 100.5 | 60.2/ 2.7 |
| Chicago | 348.4 | 461.3 | 469.4 | 568.1/157.6 | 85.7 | 99.4 | 97.9 | 79.8/31.5 |
| Cleveland | 392.8 | 466.3 | 814.5 | 477.1/ 44.1 | 98.4 | 114.7 | 202.4 | 128.3/21.5 |
| Detroit | 202.6 | 343.4 | 300.6 | 488.3/ 65.5 | 30.1 | 121.9 | 82.9 | 163.3/58.5 |
| Minneapolis/St. Paul | * | * | 546.6 | 689.5/130.1 | * | * | 47.2 | 66.4/ 0.2 |
| St. Louis | 614.1 | 656.5 | 1,070.0 | 519.6/ 99.3 | 96.5 | 91.5 | 162.6 | 61.0/15.7 |
| Dallas | 776.0 | 744.4 | 677.2 | 495.2/378.2 | 62.5 | 110.4 | 37.0 | 23.5/25.1 |
| Houston | 484.4 | 534.3 | 530.9 | 580.9/ 62.2 | 50.1 | 79.6 | 38.2 | 42.9/ 5.4 |
| Los Angeles | 692.1 | 722.9 | 1,001.7 | 569.6/173.4 | 53.8 | 77.8 | 84.8 | 53.2/51.3 |
| San Francisco | 399.5 | 714.3 | 762.3 | 628.0/159.8 | 85.8 | 110.8 | 86.3 | 48.1/ 0.0 |
| Denver | 508.5 | 644.9 | 1,002.4 | 644.9/203.0 | 46.6 | 46.8 | 119.6 | 39.9/12.7 |
| Average | 546.6 | 658.0 | 734.9 | 541.5/ 93.9 | 81.0 | 103.4 | 132.1 | 77.4/19.7 |
| Median | 428.3 | 516.5 | 587.9 | 554.1/ 84.1 | 46.0 | 70.8 | 80.8 | 53.9/ 5.3 |

*No respondents; +Q25/Q41; ±Q26/Q42; §Q27/Q43; °Q28/Q44; #Q29/Q45;
Q72 Q72 Q72 Q72 Q72

**No comparable data collected; ++Q30/Q46; §§Q31/Q47; °°Q32/Q48; ##Q33/Q49; ***Q34/Q50.
Q72 Q72 Q72 Q72 Q72

Note: The preceding footnotes also pertain to the continuation of Table 10 on the following pages.

Table 10 (continued)

| Area | Cash Withdrawals from Credit Cards§ | | | | Balance Inquiries° | | | |
|---|---|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 | 1979 | 1980 | 1981 | 1982 |
| Boston | 5.8 | 3.6 | 2.2 | 4.4/0.0 | 72.6 | 150.3 | 262.8 | 181.6/ 0.9 |
| New York | 42.2 | 29.6 | 10.6 | 6.8/0.0 | 93.4 | 302.2 | 625.9 | 344.1/ 0.2 |
| Philadelphia | 8.3 | 13.9 | 10.9 | 4.9/7.4 | 82.6 | 175.2 | 241.3 | 209.2/40.0 |
| Pittsburgh | 26.9 | 26.3 | 17.8 | 9.8/0.0 | 187.6 | 313.8 | 369.7 | 219.2/ 0.0 |
| Washington, D.C. | 22.0 | 18.3 | 6.1 | 19.6/0.0 | 142.4 | 177.2 | 153.6 | 276.4/ 9.9 |
| Atlanta | 28.9 | 14.2 | 13.1 | 8.2/0.2 | 390.0 | 347.5 | 577.8 | 247.9/18.6 |
| Chicago | 12.8 | 14.9 | 10.3 | 4.7/2.0 | 131.7 | 153.4 | 203.3 | 125.7/12.9 |
| Cleveland | 19.0 | 14.8 | 17.6 | 14.4/1.1 | 257.9 | 215.3 | 324.5 | 212.2/ 1.7 |
| Detroit | 18.2 | 15.4 | 8.7 | 63.8/0.2 | 40.1 | 197.3 | 124.5 | 155.3/ 2.2 |
| Minneapolis/St. Paul | * | * | 6.7 | 2.8/1.0 | * | * | 54.1 | 101.9/ 0.0 |
| St. Louis | 18.9 | 17.2 | 14.7 | 8.6/0.0 | 261.2 | 285.9 | 498.0 | 266.9/28.2 |
| Dallas | 38.1 | 6.8 | 1.9 | 0.6/0.5 | 530.9 | 445.5 | 368.0 | 297.0/186.4 |
| Houston | 15.2 | 0.8 | 1.1 | 1.2/0.0 | 237.7 | 208.1 | 279.6 | 282.5/ 23.4 |
| Los Angeles | 47.5 | 14.8 | 17.7 | 7.8/1.0 | 219.3 | 279.6 | 358.0 | 201.9/ 54.2 |
| San Francisco | 10.9 | 6.0 | 11.2 | 5.3/0.7 | 121.4 | 106.9 | 322.3 | 168.8/ 15.4 |
| Denver | 17.5 | 16.1 | 11.5 | 13.3/19.2 | 181.3 | 256.7 | 501.1 | 185.3/ 63.6 |
| Average | 23.4 | 14.2 | 9.8 | 11.0/1.9 | 225.7 | 242.1 | 462.6 | 217.2/ 19.7 |
| Median | 10.0 | 6.7 | 5.4 | 7.9/0.0 | 100.7 | 191.1 | 277.1 | 216.4/ 5.2 |

Table 10 (continued)

| Area | Transfers# | | | | Checking Deposits++ | | | |
|---|---|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 | 1979 | 1980 | 1981 | 1982 |
| Boston | 15.6 | 12.3 | 17.3 | 23.4/ 0.0 | 48.0 | 67.7 | 89.8 | 88.3/ 0.0 |
| New York | 9.0 | 11.1 | 32.8 | 17.3/ 0.0 | 38.9 | 65.8 | 102.1 | 103.0/ 0.0 |
| Philadelphia | 24.2 | 27.4 | 31.0 | 23.0/ 4.0 | 112.6 | 133.1 | 155.1 | 131.2/21.9 |
| Pittsburgh | 22.8 | 22.4 | 20.2 | 19.5/ 0.0 | 137.0 | 120.1 | 137.8 | 117.0/ 0.0 |
| Washington, D.C. | 34.5 | 32.0 | 13.7 | 16.0/ 0.0 | 150.4 | 136.2 | 112.0 | 98.9/ 0.0 |
| Atlanta | 30.2 | 33.5 | 32.3 | 16.5/ 0.5 | 160.7 | 113.8 | 176.8 | 91.3/ 3.6 |
| Chicago | 38.4 | 45.4 | 27.0 | 86.5/ 2.7 | 99.2 | 102.7 | 109.5 | 119.1/26.4 |
| Cleveland | 54.4 | 25.5 | 34.1 | 25.2/ 2.7 | 110.0 | 117.2 | 172.6 | 104.4/11.3 |
| Detroit | 8.7 | 38.6 | 20.5 | 29.6/ 3.8 | 31.2 | 75.0 | 102.0 | 103.5/26.4 |
| Minneapolis/St. Paul | * | * | 19.3 | 24.1/ 0.0 | * | * | 50.3 | 105.8/1.0 |
| St. Louis | 43.7 | 36.4 | 47.1 | 23.0/ 0.0 | 128.0 | 124.5 | 200.8 | 93.7/14.4 |
| Dallas | 29.2 | 23.1 | 20.1 | 8.3/11.0 | 156.1 | 155.5 | 124.4 | 85.6/54.9 |
| Houston | 19.1 | 14.4 | 9.3 | 10.0/ 0.5 | 91.8 | 106.6 | 73.2 | 70.8/ 1.2 |
| Los Angeles | 32.9 | 25.0 | 23.3 | 14.2/ 2.9 | 208.1 | 264.9 | 223.7 | 127.6/24.0 |
| San Francisco | 15.9 | 28.2 | 25.8 | 17.5/ 3.9 | 123.3 | 169.3 | 162.7 | 123.6/31.0 |
| Denver | 20.1 | 16.9 | 37.2 | 19.5/ 4.0 | 122.7 | 120.8 | 239.1 | 90.9/36.9 |
| Average | 30.1 | 29.0 | 35.2 | 2.4/ 1.7 | 127.0 | 172.2 | 164.8 | 103.4/14.2 |
| Median | 19.1 | 20.2 | 19.5 | 19.8/ 1.1 | 93.5 | 111.3 | 115.1 | 101.0/ 5.1 |

Table 10 (continued)

| Area | Savings Deposits§§ | | | | Bill Payment°° | | | |
|---|---|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 | 1979** | 1980** | 1981 | 1982 |
| Boston | 9.2 | 13.2 | 30.5 | 8.6/0.0 | | | 4.1 | 1.5/0.0 |
| New York | 1.9 | 16.0 | 38.7 | 19.2/0.0 | | | 6.2 | 8.5/0.0 |
| Philadelphia | 16.0 | 21.1 | 26.4 | 23.9/3.9 | | | 10.0 | 6.4/0.1 |
| Pittsburgh | 12.3 | 11.6 | 13.1 | 13.9/0.0 | | | 5.4 | 3.1/0.0 |
| Washington, D.C. | 20.2 | 12.2 | 5.4 | 6.4/0.0 | | | 10.3 | 7.1/0.0 |
| Atlanta | 8.4 | 28.8 | 10.1 | 6.4/0.4 | | | 5.4 | 2.5/0.0 |
| Chicago | 16.2 | 18.5 | 16.6 | 13.5/3.7 | | | 3.9 | 12.6/0.3 |
| Cleveland | 14.4 | 19.7 | 28.0 | 16.9/1.9 | | | 21.9 | 11.5/0.0 |
| Detroit | 3.7 | 14.9 | 11.3 | 23.5/5.8 | | | 7.6 | 12.8/0.6 |
| Minneapolis/St. Paul | * | * | 3.5 | 8.0/0.0 | | | 0.6 | 1.6/0.0 |
| St. Louis | 11.5 | 12.0 | 18.2 | 16.7/0.7 | | | 4.3 | 3.2/0.0 |
| Dallas | 10.4 | 22.4 | 6.4 | 3.3/2.6 | | | 8.5 | 3.9/0.2 |
| Houston | 5.3 | 8.9 | 4.4 | 3.3/0.1 | | | 1.4 | 1.1/0.0 |
| Los Angeles | 7.5 | 7.4 | 16.0 | 7.8/5.7 | | | 10.1 | 4.8/0.0 |
| San Francisco | 2.0 | 14.4 | 9.9 | 5.5/0.0 | | | 3.8 | 2.5/0.7 |
| Denver | 5.8 | 5.9 | 36.7 | 4.3/1.4 | | | * | 1.7/1.2 |
| Average | 10.2 | 17.6 | 25.1 | 11.1/2.0 | | | 8.9 | 4.5/0.1 |
| Median | 5.6 | 8.9 | 9.6 | 8.9/0.3 | | | 4.0 | 4.1/0.0 |

Table 10 (continued)

| Area | Other ATM Transactions## | | | | Total ATM Transaction*** | | | |
|---|---|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 | 1979 | 1980 | 1981 | 1982 |
| Boston | 36.1 | 3.0 | 4.3 | 0.5/ 0.0 | 567.6 | 685.6 | 1,061.0 | 1,088.3/118.3 |
| New York | 6.0 | 7.1 | 88.4 | 3.4/ 0.0 | 526.0 | 941.9 | 1,545.8 | 1,009.6/ 0.6 |
| Philadelphia | 9.3 | 44.5 | 23.8 | 22.6/ 0.6 | 710.5 | 1,010.8 | 1,226.1 | 845.7/242.7 |
| Pittsburgh | 56.4 | 3.9 | 22.2 | 4.1/ 0.0 | 1,104.3 | 1,363.1 | 1,425.1 | 863.0/ 0.0 |
| Washington, D.C. | 20.4 | 39.3 | 1.1 | 1.7/ 0.0 | 1,120.3 | 1,203.7 | 808.4 | 704.0/ 28. |
| Atlanta | 24.6 | 54.5 | 30.1 | 15.6/ 0.0 | 1,513.6 | 1,358.1 | 2,085.8 | 1,000.1/ 58.7 |
| Chicago | 144.2 | 23.9 | 7.4 | 3.9/ 3.1 | 876.7 | 919.4 | 945.2 | 1,013.9/240.2 |
| Cleveland | 36.3 | 21.5 | 35.5 | 9.8/ 0.0 | 984.2 | 994.9 | 1,651.1 | 999.8/ 84.2 |
| Detroit | 3.0 | 17.4 | 25.3 | 26.9/ 0.8 | 337.7 | 823.8 | 683.4 | 1,027 /127.3 |
| Minneapolis/St. Paul | * | * | 24.5 | 0.0/ 0.0 | * | * | 752.8 | 999.8/132.4 |
| St. Louis | 29.2 | 16.5 | 95.1 | 7.2/ 0.3 | 1,203.1 | 1,240.5 | 2,110.7 | 999.9/160.8 |
| Dallas | 12.1 | 56.7 | 0.6 | 82.7/17.3 | 1,615.4 | 1,564.9 | 1,245.0 | 1,000.0/676.1 |
| Houston | 87.1 | 3.0 | 0.0 | 7.3/ 0.0 | 990.7 | 955.7 | 938.1 | 1,000.0/ 92.7 |
| Los Angeles | 21.7 | 20.4 | 15.8 | 13.2/ 0.0 | 1,282.8 | 1,412.7 | 1,751.1 | 790.4/312.4 |
| San Francisco | 4.1 | 4.8 | 18.0 | 0.4/ 0.4 | 763.0 | 1,154.7 | 1,402.2 | 999.2/194.8 |
| Denver | 43.6 | 27.5 | 6.9 | 0.1/ 0.0 | 945.2 | 1,135.5 | 1,954.5 | 999.9/342.0 |
| Average | 30.0 | 25.5 | 72.8 | 12.5/ 2.3 | 1,074.0 | 1,262.1 | 1,646.1 | 958.8/119.5 |
| Median | 5.2 | 5.1 | 0.0 | 8.3/ 0.0 | 792.2 | 1,040.7 | 1,138.1 | 901.5/120.5 |

Table 11

Number of Weekly Transactions per ATM Unit Location by Area

| Area | Main Office Units | | | |
|---|---|---|---|---|
| | Lobby+ | Vestibule± | Through the Wall§ | Drive-up° |
| Boston | 1,595/0 | 1,664/306 | 3,018/0 | 0/0 |
| New York | 1,007/0 | 1,120/2 | 1,413/0 | 0/0 |
| Philadelphia | 876/532 | 1,358/35 | 695/1250 | 0/0 |
| Pittsburgh | 0/0 | 0/0 | 0/0 | 0/0 |
| Washington, D.C. | 1,258/0 | 1,101/0 | 2,410/0 | 0/0 |
| Atlanta | 637/0 | 1,463/0 | 1,077/18 | 1,763/0 |
| Chicago | 681/46 | 1,374/128 | 604/168 | 0/0 |
| Cleveland | 508/45 | 733/93 | 688/0 | 0/0 |
| Detroit | 382/0 | 648/0 | 953/50 | 752/0 |
| Minneapolis/St. Paul | 1,394/133 | 0/0 | 370/91 | 0/0 |
| St. Louis | 853/20 | 1,213/16 | 353/53 | 0/0 |
| Dallas | 496/33 | 1,484/139 | 1,156/114 | 598/45 |
| Houston | 867/82 | 267/12 | 1,261/35 | 1,112/136 |
| Los Angeles | 863/194 | 0/0 | 1,217/0 | 376/243 |
| San Francisco | 0/0 | 0/0 | 462/71 | 0/0 |
| Denver | 457/83 | 732/493 | 968/382 | 0/0 |
| Average | 879/60 | 1,338/153 | 944/127 | 725/85 |
| Median | 696/41 | 1,060/63 | 812/75 | 675/90 |

+Q121/Q153; ±Q122/Q154; §Q123/Q155; °Q124/Q156; #Q125/Q157;
Q57 Q58 Q59 Q60 Q61

++Q126/Q158; ±±Q127/Q159; §§Q128/Q160; °°Q129/Q161; ##Q130/Q162;
Q62 Q63 Q64 Q65 Q66

+++Q131/Q163; ±±±Q132/Q164; §§§Q133/Q165; °°°Q134/Q166; ###Q135/Q167;
Q67 Q68 Q69 Q70 Q71

++++Q136/Q168.
Q72

Note: The preceding footnote also pertains to the continuation of Table 11 on the following pages.

Table 11 (continued)

Branch Office Units

| Area | Lobby# | Vestibule++ | Through the Wall±± | Drive-up§§ |
|---|---|---|---|---|
| Boston | 283/5 | 926/98 | 975/116 | 441/158 |
| New York | 366/0 | 887/0 | 777/0 | 429/0 |
| Philadelphia | 611/202 | 654/25 | 877/195 | 1,269/26 |
| Pittsburgh | 844/0 | 0/0 | 1,348/0 | 0/0 |
| Washington, D.C. | 397/0 | 471/0 | 700/0 | 862/0 |
| Atlanta | 369/0 | 696/0 | 985/10 | 668/6 |
| Chicago | 559/101 | 831/272 | 537/203 | 591/0 |
| Cleveland | 296/0 | 998/294 | 644/0 | 789/0 |
| Detroit | 254/21 | 718/189 | 1,462/546 | 989/148 |
| Minneapolis/St. Paul | 1,000/0 | 317/219 | 516/54 | 692/152 |
| St. Louis | 322/3 | 597/8 | 1,083/40 | 726/34 |
| Dallas | 0/0 | 0/0 | 0/0 | 0/0 |
| Houston | 368/0 | 316/49 | 1,108/42 | 706/50 |
| Los Angeles | 134/27 | 2,110/0 | 1,177/534 | 1,562/0 |
| San Francisco | 118/0 | 0/0 | 471/33 | 455/7 |
| Denver | 0/0 | 0/0 | 602/608 | 0/0 |
| Average | 412/26 | 681/31 | 1,069/255 | 656/42 |
| Median | 367/5 | 807/49 | 886/44 | 696/6 |

Table 11 (continued)

Off-Premise Units

| Area | Free Standing°° | University College## | Shopping Center+++ | Grocery/ Retail Store±±± |
|---|---|---|---|---|
| Boston | 0/0 | 0/0 | 1,685/0 | 0/0 |
| New York | 419/0 | 2,317/0 | 434/0 | 389/0 |
| Philadelphia | 758/0 | 1,486/0 | 1,154/714 | 270/0 |
| Pittsburgh | 0/0 | 0/0 | 0/0 | 700/0 |
| Washington, D.C. | 525/0 | 0/0 | 0/0 | 0/0 |
| Atlanta | 837/23 | 1,583/58 | 578/1 | 938/0 |
| Chicago | 1,276/581 | 0/0 | 0/0 | 826/229 |
| Cleveland | 232/0 | 1,920/0 | 0/0 | 244/0 |
| Detroit | 130/164 | 0/0 | 75/0 | 876/469 |
| Minneapolis/St. Paul | 500/0 | 0/0 | 500/0 | 1,000/0 |
| St. Louis | 478/145 | 424/192 | 697/497 | 0/0 |
| Dallas | 345/988 | 0/0 | 0/0 | 155/399 |
| Houston | 0/0 | 2,409/119 | 463/39 | 0/0 |
| Los Angeles | 731/522 | 877/417 | 467/0 | 0/0 |
| San Francisco | 0/0 | 1,257/5 | 284/64 | 0/0 |
| Denver | 786/651 | 0/0 | 0/0 | 126/860 |
| Average | 913/230 | 1,653/83 | 649/53 | 551/415 |
| Median | 600/338 | 1,274/111 | 567/1 | 516/292 |

Table 11 (continued)

Off-Premise Units

| Area | Office/Corporate Complex§§§ | Hospital°°° | Other### | Total++++ |
|---|---|---|---|---|
| Boston | 0/0 | 0/0 | 0/0 | 974/18 |
| New York | 450/0 | 648/0 | 0/0 | 1,075/0 |
| Philadelphia | 508/14 | 342/0 | 508/0 | 842/188 |
| Pittsburgh | 373/0 | 0/0 | 0/0 | 1,279/0 |
| Washington, D.C. | 567/0 | 504/0 | 0/0 | 679/0 |
| Atlanta | 726/0 | 916/0 | 539/0 | 993/13 |
| Chicago | 1,056/80 | 1,098/485 | 268/301 | 736/165 |
| Cleveland | 281/0 | 807/399 | 530/0 | 769/128 |
| Detroit | 75/0 | 75/0 | 0/0 | 709/153 |
| Minneapolis/St. Paul | 72/0 | 0/0 | 0/0 | 435/62 |
| St. Louis | 368/304 | 0/0 | 0/0 | 934/72 |
| Dallas | 0/0 | 0/0 | 108/771 | 701/382 |
| Houston | 438/0 | 0/0 | 626/41 | 940/70 |
| Los Angeles | 0/0 | 130/0 | 179/0 | 1,058/505 |
| San Francisco | 0/0 | 0/0 | 433/868 | 1,732/1,089 |
| Denver | 0/0 | 0/0 | 892/306 | 589/269 |
| Average | 454/43 | 561/228 | 413/184 | 1,289/147 |
| Median | 406/0 | 571/392 | 349/301 | 852/108 |

Location of ATM Units

Banks continue to give high priority to placing ATM terminals on bank property. Consistent with previous studies, 88.5% of all ATM units are located at main office or branch locations.

As shown in Table 12, the priority in placing ATMs off-premise varies widely from one geographic region to another. Most of the regions experienced an increase in ATMs placed off-premise except for Atlanta (46% decrease from 31.3% to 16.9%), St. Louis (25% decrease from 10.4% to 7.2%), Denver (20.6% decrease from 31.6% to 25.1%), and Washington, D.C. (12% decrease from 7.5% to 6.6%). The greatest percentage increase of off-premise ATM installations was experienced in Minneapolis (up 1,433% from 2.4% to 36.8%) and Dallas (up 70.6% from 26.6% to 45.4%).

Table 12

ATM Units by Area

| Area | Percent of Main Office ATM Units+ | | | | Percent of Branch Office ATM Units± | | | |
|---|---|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 | 1979 | 1980 | 1981 | 1982 |
| Boston | 34.0% | 31.8% | 23.3% | 18.6% | 66.0% | 67.1% | 73.9% | 65.1% |
| New York | 11.3 | 17.8 | 4.4 | 9.0 | 85.7 | 71.1 | 88.4 | 82.8 |
| Philadelphia | 15.8 | 5.1 | 5.4 | 4.2 | 79.5 | 87.0 | 81.2 | 80.5 |
| Pittsburgh | 30.9 | 2.9 | 6.2 | 6.6 | 64.2 | 94.6 | 88.6 | 80.8 |
| Washington, D.C. | 13.8 | 2.9 | 2.5 | 3.4 | 78.3 | 88.2 | 90.1 | 89.9 |
| Atlanta | 14.0 | 6.3 | 6.5 | 7.7 | 64.6 | 76.7 | 79.3 | 73.8 |
| Chicago | 47.9 | 50.6 | 34.6 | 42.6 | 37.1 | 34.7 | 34.1 | 40.5 |
| Cleveland | 6.4 | 7.1 | 6.1 | 7.1 | 89.3 | 89.5 | 87.4 | 85.5 |
| Detroit | 18.3 | 7.1 | 8.7 | 5.1 | 60.9 | 70.7 | 80.9 | 77.7 |
| Minneapolis/St. Paul | * | * | 57.7 | 33.5 | * | * | 39.9 | 29.5 |
| St. Louis | 26.8 | 25.9 | 21.3 | 22.6 | 64.8 | 68.2 | 68.2 | 69.6 |
| Dallas | 66.7 | 55.0 | 39.4 | 39.9 | 30.8 | 18.7 | 34.0 | 14.8 |
| Houston | 46.3 | 29.2 | 38.8 | 46.1 | 50.3 | 64.7 | 52.2 | 42.4 |
| Los Angeles | 7.1 | 4.8 | 4.3 | 3.1 | 88.5 | 93.2 | 92.3 | 91.8 |
| San Francisco | 3.9 | 1.5 | 1.6 | 2.4 | 88.4 | 97.4 | 96.5 | 92.8 |
| Denver | 48.3 | 38.6 | 28.0 | 36.2 | 39.4 | 43.1 | 40.4 | 38.6 |
| Average | 13.3% | 8.1% | 7.0% | 4.8% | 77.7% | 83.5% | 84.6% | 83.7% |
| Median | 7.7% | 5.4% | 6.3% | 1.5% | 84.2% | 88.6% | 85.5% | 57.0% |

Table 12 (continued)

| Area | Percent of Off-Premise ATM Units§ | | | |
|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 |
| Boston | 0.0% | 1.1% | 2.8% | 16.3% |
| New York | 3.1 | 11.1 | 7.3 | 8.0 |
| Philadelphia | 4.7 | 7.9 | 13.4 | 15.3 |
| Pittsburgh | 4.8 | 2.5 | 5.2 | 12.7 |
| Washington, D.C. | 8.0 | 8.9 | 7.5 | 6.6 |
| Atlanta | 21.3 | 17.1 | 14.2 | 18.5 |
| Chicago | 15.0 | 14.6 | 31.3 | 16.9 |
| Cleveland | 4.3 | 3.4 | 6.4 | 7.4 |
| Detroit | 20.7 | 22.3 | 10.4 | 17.2 |
| Minneapolis/St. Paul | * | * | 2.4 | 36.8 |
| St. Louis | 8.3 | 5.9 | 10.4 | 7.8 |
| Dallas | 2.6 | 26.3 | 26.6 | 45.4 |
| Houston | 3.3 | 6.1 | 9.0 | 12.4 |
| Los Angeles | 4.4 | 2.0 | 3.5 | 5.3 |
| San Francisco | 7.7 | 1.1 | 1.9 | 4.9 |
| Denver | 12.3 | 18.3 | 31.6 | 25.1 |
| Average | 9.1% | 8.5% | 8.5% | 11.5% |
| Median | 0.0% | 0.0% | 3.7% | 0.0% |

*No respondents; $+\frac{Q57+Q58+Q59+Q60}{Q72} \times 100$; $+\frac{Q61+Q62+Q63+Q64}{Q72}$; $\S\frac{Q65+Q66+Q67+Q68+Q69+70+Q71}{Q72}$

The specific locations of ATM installations are shown in Table 13. As a percentage of total ATM installations, when ATMs were placed at the main office, the preferred location was 2% for lobby installations and 1.9% for through-the-wall installations. At branch locations, the through-the-wall ATM constitutes 53.2% of all ATM installations. For off-premise installations, 3.5% of total installations were free-standing ATMs; 2.1% were in grocery/retail locations, and 1.8% at shopping centers.

Table 13

1982 ATM Units by Area

Main Office

| Area | Lobby+ | Vestibule± | Through the Wall§ | Drive-up° |
|---|---|---|---|---|
| Boston | 1.5% | 1.4% | 15.7% | 0.0% |
| New York | 4.0 | 1.7 | 3.3 | 0.0 |
| Philadelphia | 1.4 | 1.7 | 1.1 | 0.0 |
| Pittsburgh | 4.4 | 0.0 | 2.2 | 0.0 |
| Washington, D.C. | 1.2 | 0.2 | 1.8 | 0.2 |
| Atlanta | 1.3 | 1.2 | 5.1 | 0.1 |
| Chicago | 27.8 | 5.8 | 9.0 | 0.0 |
| Cleveland | 3.4 | 3.2 | 0.5 | 0.0 |
| Detroit | 2.7 | 0.7 | 0.7 | 1.0 |
| Minneapolis/St. Paul | 11.7 | 5.0 | 16.3 | 0.5 |
| St. Louis | 13.2 | 4.7 | 4.7 | 0.0 |
| Dallas | 12.0 | 10.2 | 15.0 | 2.7 |
| Houston | 34.3 | 6.3 | 1.3 | 4.2 |
| Los Angeles | 1.0 | 0.2 | 1.7 | 0.2 |
| San Francisco | 1.1 | 0.0 | 1.3 | 0.0 |
| Denver | 16.3 | 10.7 | 9.2 | 0.0 |
| Average | 2.0% | 0.8% | 1.9% | 0.1% |
| Median | 1.5% | 0.0% | 0.0% | 0.0% |

$+\frac{Q57}{Q72} \times 100$; $\pm\frac{Q58}{Q72} \times 100$; $\S\frac{Q59}{Q72} \times 100$; $^{\circ}\frac{Q60}{Q72} \times 100$; $\#\frac{Q61}{Q72} \times 100$;

$++\frac{Q62}{Q72} \times 100$; $\pm\pm\frac{Q63}{Q72} \times 100$; $\S\S\frac{Q64}{Q72} \times 100$; $^{\circ\circ}\frac{Q65}{Q72} \times 100$; $\#\#\frac{Q66}{Q72} \times 100$;

$+++\frac{Q67}{Q72} \times 100$; $\pm\pm\pm\frac{Q68}{Q72} \times 100$; $\S\S\S\frac{Q69}{Q72} \times 100$; $^{\circ\circ\circ}\frac{Q70}{Q72} \times 100$; $\#\#\#\frac{Q71}{Q72} \times 100$.

Note: The preceding footnote also pertains to the continuation of Table 13 on the following pages.

Table 13 (continued)

Branch Office

| Area | Lobby# | Vestibule++ | Through the Wall±± | Drive-up§§ |
|---|---|---|---|---|
| Boston | 3.9% | 32.7% | 27.5% | 1.0% |
| New York | 10.9 | 53.1 | 17.8 | 1.0 |
| Philadelphia | 1.0 | 12.6 | 63.1 | 3.8 |
| Pittsburgh | 3.3 | 0.0 | 77.5 | 0.0 |
| Washington, D.C. | 5.9 | 12.7 | 67.2 | 4.1 |
| Atlanta | 0.7 | 3.7 | 65.2 | 4.2 |
| Chicago | 8.0 | 8.9 | 21.8 | 1.8 |
| Cleveland | 6.1 | 27.2 | 47.1 | 5.1 |
| Detroit | 11.1 | 25.0 | 37.7 | 3.9 |
| Minneapolis/St. Paul | 2.3 | 17.0 | 7.3 | 2.9 |
| St. Louis | 0.8 | 7.7 | 55.1 | 6.0 |
| Dallas | 0.0 | 0.0 | 14.8 | 0.0 |
| Houston | 0.9 | 1.3 | 35.1 | 4.2 |
| Los Angeles | 4.3 | 0.7 | 86.0 | 0.8 |
| San Francisco | 1.2 | 0.3 | 87.4 | 3.9 |
| Denver | 4.6 | 10.8 | 23.2 | 0.0 |
| Average | 13.7% | 14.7% | 53.2% | 2.1% |
| Median | 0.0% | 0.0% | 57.0% | 0.0% |

Table 13 (continued)

Off-Premise

| Area | Free Standing°° | University College## | Shopping Center+++ | Grocery/ Retail Store±±± |
|---|---|---|---|---|
| Boston | 0.5% | 0.0% | 0.4% | 0.0% |
| New York | 1.1 | 3.5 | 0.1 | 1.0 |
| Philadelphia | 4.0 | 0.8 | 4.7 | 2.1 |
| Pittsburgh | 2.0 | 2.1 | 0.0 | 4.5 |
| Washington, D.C. | 0.5 | 0.3 | 1.0 | 0.2 |
| Atlanta | 12.6 | 1.9 | 2.5 | 0.5 |
| Chicago | 2.6 | 0.4 | 0.0 | 6.5 |
| Cleveland | 0.9 | 0.7 | 0.5 | 0.3 |
| Detroit | 3.1 | 0.1 | 0.6 | 0.8 |
| Minneapolis/St. Paul | 8.0 | 0.0 | 14.8 | 7.0 |
| St. Louis | 1.0 | 2.3 | 3.5 | 0.0 |
| Dallas | 21.0 | 0.0 | 2.6 | 20.9 |
| Houston | 0.0 | 1.7 | 3.0 | 0.0 |
| Los Angeles | 2.1 | 1.1 | 0.6 | 0.0 |
| San Francisco | 0.4 | 1.1 | 1.2 | 0.1 |
| Denver | 14.9 | 0.0 | 0.0 | 2.8 |
| Average | 3.5% | 1.3% | 1.8% | 2.1% |
| Median | 0.0% | 0.0% | 0.0% | 0.0% |

Table 13 (continued)

Off-Premise Units

| Area | Office/Corporate Complex§§§ | Hospital°°° | Other### |
|---|---|---|---|
| Boston | 0.0% | 1.1% | 14.3% |
| New York | 1.0 | 1.6 | 0.1 |
| Philadelphia | 1.1 | 0.1 | 2.5 |
| Pittsburgh | 2.3 | 1.8 | 0.0 |
| Washington, D.C. | 1.2 | 0.8 | 2.6 |
| Atlanta | 0.8 | 0.0 | 0.2 |
| Chicago | 3.0 | 2.7 | 1.7 |
| Cleveland | 0.8 | 3.7 | 0.5 |
| Detroit | 12.3 | 0.3 | 0.0 |
| Minneapolis/St. Paul | 5.0 | 0.0 | 2.0 |
| St. Louis | 1.0 | 0.0 | 0.0 |
| Dallas | 0.0 | 0.0 | 0.9 |
| Houston | 4.6 | 0.0 | 3.1 |
| Los Angeles | 0.5 | 0.2 | 0.8 |
| San Francisco | 1.4 | 0.0 | 0.7 |
| Denver | 0.0 | 0.0 | 7.4 |
| Average | 1.3% | 0.7% | 0.8% |
| Median | 0.0% | 0.0% | 0.0% |

ATM Installation Plans

Consistent with previous studies, banks are still giving priority to branch office sites for new ATM installations (see Table 14). In all, 67.2% of ATMs were planned to be installed on bank property, with 3% at main office locations and 64.2% at branch office locations. The percentage of ATMs to be installed off-premise was reported at 32.5%, a 40.1% increase from the 23.3% reported in 1982. Total ATM installation growth decreased slightly to 43.1% in comparison to current installations. The number of installed ATMs has grown significantly between 1981 and 1982 from an approximate 25,800 to a year-end total of 35,700. Boston (105.3%) had the highest growth in new installations.

Table 14

ATM Unit Installation Plans by Area

| Area | Percent of Total ATM Units to Be Installed in Main Office+ | | | | Percent of Total ATM Units to Be Installed in Branch Office± | | | |
|---|---|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 | 1979 | 1980 | 1981 | 1982 |
| Boston | 16.7% | 4.8% | 3.3% | 7.5% | 81.3% | 82.9% | 90.0% | 72.5% |
| New York | 0.8 | 3.3 | 1.0 | 1.2 | 74.2 | 86.6 | 38.9 | 64.2 |
| Philadelphia | 9.5 | 1.1 | 6.2 | 2.0 | 75.8 | 81.7 | 78.6 | 70.0 |
| Pittsburgh | 3.3 | 0.0 | 2.8 | 0.0 | 80.0 | 68.8 | 53.7 | 83.4 |
| Washington, D.C. | 0.0 | 0.0 | 3.2 | 0.6 | 98.2 | 93.8 | 85.8 | 81.1 |
| Atlanta | 6.3 | 5.3 | 6.6 | 7.1 | 52.7 | 65.0 | 69.2 | 57.5 |
| Chicago | 29.9 | 14.3 | 7.7 | 12.9 | 41.1 | 57.6 | 47.5 | 25.3 |
| Cleveland | 0.0 | 5.2 | 0.8 | 0.5 | 92.1 | 87.4 | 57.9 | 74.9 |
| Detroit | 0.0 | 20.8 | 7.4 | 14.4 | 46.9 | 40.1 | 75.9 | 78.1 |
| Minneapolis/St. Paul | * | * | 25.0 | 0.0 | * | * | 55.0 | 18.4 |
| St. Louis | 16.7 | 15.6 | 8.3 | 36.7 | 63.9 | 60.0 | 66.7 | 47.5 |
| Dallas | 20.0 | 0.0 | 13.3 | 31.9 | 70.0 | 12.5 | 21.7 | 0.0 |
| Houston | 28.1 | 25.0 | 41.6 | 52.7 | 56.3 | 35.0 | 34.4 | 35.3 |
| Los Angeles | 35.7 | 2.0 | 16.1 | 1.8 | 60.3 | 90.0 | 62.5 | 68.8 |
| San Francisco | 0.1 | 0.1 | 0.0 | 2.1 | 89.1 | 78.3 | 86.1 | 83.3 |
| Denver | 8.3 | 13.3 | 46.7 | 75.0 | 25.0 | 50.0 | 30.0 | 0.0 |
| Average | 17.8% | 3.0% | 2.9% | 3.0% | 71.7% | 72.3% | 73.9% | 64.2% |
| Median | 0.0% | 0.0% | 0.0% | 0.0% | 80.6% | 80.0% | 70.2% | 20.0% |

*No respondents; $+\frac{Q89+Q90+Q91+Q92}{Q104} \times 100$; $+\frac{Q93+Q94+Q95+Q96}{Q104} \times 100$;

$\S\frac{Q97+Q98+Q99+Q100+Q101+Q102+Q103}{Q104} \times 100$; $^{\circ}\frac{Q104}{Q72} \times 100$.

Table 14 (continued)

| Area | Percent of Total ATM Units to Be Installed Off-Premise§ | | | | Total New ATM Installation to Current Installations° | | | |
|---|---|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 | 1979 | 1980 | 1981 | 1982 |
| Boston | 2.1% | 12.3% | 6.7% | 20.0% | 387.0% | 111.5% | 38.5% | 105.3% |
| New York | 25.0 | 10.1 | 60.1 | 24.6 | 812.9 | 38.6 | 29.9 | 43.1 |
| Philadelphia | 14.6 | 17.2 | 14.7 | 28.0 | 760.4 | 94.8 | 32.1 | 37.6 |
| Pittsburgh | 16.7 | 31.2 | 43.5 | 16.6 | 143.3 | 123.2 | 28.8 | 30.1 |
| Washington, D.C. | 1.8 | 6.2 | 11.0 | 18.3 | 14.6 | 37.2 | 52.7 | 31.1 |
| Atlanta | 41.0 | 29.6 | 24.2 | 35.4 | 73.9 | 55.1 | 61.7 | 37.6 |
| Chicago | 39.1 | 28.1 | 44.8 | 61.8 | 93.6 | 34.9 | 36.8 | 45.9 |
| Cleveland | 7.9 | 7.5 | 41.3 | 24.6 | 27.2 | 45.1 | 37.2 | 56.3 |
| Detroit | 53.1 | 39.1 | 16.7 | 7.5 | 68.4 | 41.5 | 90.2 | 55.6 |
| Minneapolis/St. Paul | * | * | 20.0 | 81.6 | * | * | 39.9 | 24.8 |
| St. Louis | 19.4 | 24.4 | 25.0 | 15.8 | 61.5 | 18.1 | 13.8 | 16.9 |
| Dallas | 10.0 | 87.5 | 65.0 | 68.1 | 174.4 | 423.3 | 75.2 | 23.4 |
| Houston | 15.6 | 40.0 | 24.0 | 12.0 | 136.2 | 47.5 | 58.1 | 47.0 |
| Los Angeles | 4.1 | 7.1 | 21.4 | 24.4 | 128.3 | 57.5 | 33.3 | 58.6 |
| San Francisco | 10.7 | 21.7 | 13.9 | 14.6 | 202.8 | 69.3 | 55.1 | 41.1 |
| Denver | 66.7 | 36.7 | 23.3 | 25.0 | 55.6 | 70.2 | 45.8 | 52.8 |
| Average | 10.5% | 24.7% | 23.2% | 32.5% | 74.8% | 50.5% | 34.7% | 43.1% |
| Median | 0.0% | 8.9% | 16.3% | 0.0% | 30.0% | 30.0% | 24.7% | 34.5% |

Table 15 shows the relation of installation plans to specific locations. Of the 3% of ATMs planned for the main office location, 1.7% were to be installed in the lobby and 0.8% through-the-wall. At branch locations, 21.5% ATMs were to be installed in the lobby and 20.9% through-the-wall. The increasing percentage of ATMs at off-premise locations indicates that 11% of ATMs were to be installed in grocery/retail stores and 9.4% in free-standing locations.

Table 15

1982 ATM Unit Installation Plans by Area

Percent of Total ATM Units to Be Installed in Main Office

| Area | Lobby+ | Vestibule± | Through the Wall§ | Drive-up° |
|---|---|---|---|---|
| Boston | 1.9% | 2.8 | 0.0% | 2.8% |
| New York | 0.0 | 1.2 | 0.0 | 0.0 |
| Philadelphia | 2.0 | 0.0 | 0.0 | 0.0 |
| Pittsburgh | 0.0 | 0.0 | 0.0 | 0.0 |
| Washington, D.C. | 0.5 | 0.1 | 0.0 | 0.0 |
| Atlanta | 4.0 | 0.0 | 3.1 | 0.0 |
| Chicago | 9.3 | 0.0 | 3.6 | 0.0 |
| Cleveland | 0.5 | 0.0 | 0.0 | 0.0 |
| Detroit | 14.3 | 0.1 | 0.0 | 0.0 |
| Minneapolis/St. Paul | 0.0 | 0.0 | 0.0 | 0.0 |
| St. Louis | 20.0 | 16.7 | 0.0 | 0.0 |
| Dallas | 8.3 | 0.0 | 8.3 | 15.3 |
| Houston | 22.9 | 9.8 | 0.0 | 20.0 |
| Los Angeles | 1.6 | 0.0 | 0.2 | 0.0 |
| San Francisco | 2.1 | 0.0 | 0.0 | 0.0 |
| Denver | 45.8 | 0.0 | 16.7 | 12.5 |
| Average | 1.7% | 0.4% | 0.8% | 0.4% |
| Median | 0.0% | 0.0% | 0.0% | 0.0% |

$+\frac{Q84}{Q104} \times 100$; $\pm\frac{Q90}{Q104} \times 100$; $\S\frac{Q91}{Q104} \times 100$; $^{\circ}\frac{Q92}{Q104} \times 100$; $\#\frac{Q93}{Q104} \times 100$;

$++\frac{Q94}{Q104} \times 100$; $\pm\pm\frac{Q95}{Q104} \times 100$; $\S\S\frac{Q96}{Q104} \times 100$; $^{\circ\circ}\frac{Q97}{Q104} \times 100$; $\#\#\frac{Q98}{Q104} \times 100$;

$+++\frac{Q99}{Q104} \times 100$; $\pm\pm\pm\frac{Q100}{Q104} \times 100$; $\S\S\S\frac{Q101}{Q104} \times 100$; $^{\circ\circ\circ}\frac{Q102}{Q104} \times 100$; $\#\#\#\frac{Q103}{Q104} \times 100$.

Note: The preceding footnote also pertains to the continuation of Table 15 on the following pages.

Table 15 (continued)

Percent of Total ATM Units to Be Installed in Branch Office

| Area | Lobby# | Vestibule++ | Through the Wall±± | Drive-up§§ |
|---|---|---|---|---|
| Boston | 23.7% | 43.1% | 2.6% | 3.1% |
| New York | 6.6 | 46.8 | 15.8 | 0.0 |
| Philadelphia | 14.3 | 3.1 | 48.5 | 4.1 |
| Pittsburgh | 11.1 | 0.0 | 55.6 | 16.7 |
| Washington, D.C. | 9.9 | 9.9 | 48.1 | 13.2 |
| Atlanta | 9.6 | 0.0 | 40.3 | 7.6 |
| Chicago | 0.0 | 0.0 | 18.6 | 6.7 |
| Cleveland | 9.6 | 3.1 | 57.9 | 4.3 |
| Detroit | 20.6 | 7.5 | 37.3 | 12.7 |
| Minneapolis/St. Paul | 0.0 | 5.3 | 5.3 | 7.8 |
| St. Louis | 8.3 | 0.0 | 27.5 | 11.7 |
| Dallas | 0.0 | 0.0 | 0.0 | 0.0 |
| Houston | 12.9 | 2.9 | 8.6 | 10.9 |
| Los Angeles | 28.4 | 6.5 | 32.2 | 1.7 |
| San Francisco | 26.6 | 0.0 | 53.3 | 3.4 |
| Denver | 0.0 | 0.0 | 0.0 | 0.0 |
| Average | 21.5% | 16.7% | 20.9% | 5.1% |
| Median | 0.0% | 0.0% | 20.0% | 0.0% |

Table 15 (continued)

Percent of ATMs to Be Installed Off-Premise

| | Free Standing°° | University College## | Shopping Center+++ | Grocery/ Retail Store‡‡‡ |
|---|---|---|---|---|
| Boston | 10.3% | 0.8% | 0.7% | 0.3% |
| New York | 15.7 | 2.1 | 2.6 | 4.2 |
| Philadelphia | 11.3 | 0.0 | 5.4 | 1.9 |
| Pittsburgh | 0.0 | 0.0 | 0.0 | 0.0 |
| Washington, D.C. | 9.7 | 0.0 | 0.0 | 0.5 |
| Atlanta | 18.0 | 1.5 | 11.4 | 0.0 |
| Chicago | 5.6 | 0.0 | 0.0 | 28.3 |
| Cleveland | 3.2 | 0.2 | 0.0 | 13.8 |
| Detroit | 0.0 | 0.0 | 0.0 | 4.2 |
| Minneapolis/St. Paul | 38.9 | 0.0 | 0.0 | 28.9 |
| St. Louis | 0.0 | 0.0 | 0.0 | 1.7 |
| Dallas | 55.6 | 0.0 | 0.0 | 12.5 |
| Houston | 0.0 | 0.0 | 12.0 | 0.0 |
| Los Angeles | 16.3 | 1.8 | 5.9 | 0.0 |
| San Francisco | 4.6 | 0.6 | 3.1 | 2.9 |
| Denver | 12.5 | 0.0 | 0.0 | 12.5 |
| Average | 9.4% | 0.9% | 3.7% | 11.0% |
| Median | 0.0% | 0.0% | 0.0% | 0.0% |

Table 15 (continued)

| Area | Office Corporate Complex§§§ | Hospital°°° | Other### |
|---|---|---|---|
| Boston | 1.0% | 6.9% | 0.0% |
| New York | 2.2 | 0.7 | 2.1 |
| Philadelphia | 8.6 | 0.8 | 0.0 |
| Pittsburgh | 11.1 | 5.6 | 0.0 |
| Washington, D.C. | 1.1 | 1.1 | 5.9 |
| Atlanta | 1.7 | 2.8 | 0.0 |
| Chicago | 20.4 | 3.3 | 4.2 |
| Cleveland | 0.0 | 6.4 | 1.0 |
| Detroit | 0.9 | 0.0 | 2.4 |
| Minneapolis/St. Paul | 0.0 | 0.0 | 13.9 |
| St. Louis | 5.8 | 0.0 | 8.3 |
| Dallas | 0.0 | 0.0 | 0.0 |
| Houston | 0.0 | 0.0 | 0.0 |
| Los Angeles | 0.6 | 0.7 | 4.1 |
| San Francisco | 3.4 | 0.0 | 0.0 |
| Denver | 0.0 | 0.0 | 0.0 |
| Average | 1.5% | 1.1% | 4.9% |
| Median | 0.0% | 0.0% | 0.0% |

On-Line Versus Off-Line

Banks continue to be strongly committed to on-line ATM operations (Table 16). Currently, 94.2% of those banks participating in the survey reported operating on-line. Ten areas reported 100% on-line operation for 1982. The highest level of off-line operations was reported in Boston (25.0%).

Table 16

On-Line Versus Off-Line ATM Units by Area

| Area | Percent On-Line ATM Units | | | | Percent Off-Line ATM Units | | | |
|---|---|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1982 | 1979 | 1980 | 1981 | 1982 |
| Boston | 20.0% | 75.0% | 75.0% | 75.0% | 80.0% | 25.0% | 25.0% | 25.0% |
| New York | 33.3 | 80.0 | 100.0 | 100.0 | 66.7 | 20.0 | 0.0 | 0.0 |
| Philadelphia | 40.0 | 81.8 | 85.7 | 91.7 | 60.0 | 18.2 | 14.3 | 8.3 |
| Pittsburgh | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Washington, D.C. | 50.0 | 75.0 | 60.0 | 100.0 | 50.0 | 25.0 | 40.0 | 0.0 |
| Atlanta | 83.3 | 84.6 | 100.0 | 95.2 | 16.6 | 15.4 | 0.0 | 4.8 |
| Chicago | 50.0 | 66.7 | 85.7 | 77.8 | 50.0 | 33.3 | 14.3 | 22.2 |
| Cleveland | 85.7 | 100.0 | 100.0 | 90.9 | 14.3 | 0.0 | 0.0 | 9.1 |
| Detroit | 66.7 | 100.0 | 100.0 | 100.0 | 33.3 | 0.0 | 0.0 | 0.0 |
| Minneapolis/St. Paul | * | * | 100.0 | 100.0 | * | * | 0.0 | 0.0 |
| St. Louis | 50.0 | 80.0 | 85.7 | 100.0 | 50.0 | 20.0 | 14.3 | 0.0 |
| Dallas | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Houston | 80.0 | 100.0 | 100.0 | 100.0 | 20.0 | 0.0 | 0.0 | 0.0 |
| Los Angeles | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| San Francisco | 80.0 | 100.0 | 100.0 | 88.9 | 20.0 | 0.0 | 0.0 | 11.1 |
| Denver | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Average | 68.4% | 87.3% | 92.8% | 94.2% | 31.6% | 12.7% | 7.2% | 5.8% |

*No respondents.

# APPENDICES

# APPENDIX A

# 1982 SURVEY QUESTIONNAIRE

# 1982 Survey of Electronic Funds Transfer Transactions

Bank Administration Institute

## INSTRUCTIONS

- Please report all data for the period beginning Monday, November 15, 1982, and ending Sunday, November 21, 1982.
- The Comments, Section X, should be completed at the end of the survey period.
- Since you may be unable to answer all questions, please respond with "N.A." if the question does not apply to your bank, or with a "zero" where appropriate.
- Please read all definitions before completing the survey.
- Mail the completed survey booklet to:

  Constance Blecha
  Research Assistant
  Bank Administration Institute
  60 Gould Center
  Rolling Meadows, Illinois 60008

- If you have any questions, please call Marjolijn van der Velde, Principal Research Manager, at (312) 228-6200.

## BANK ADMINISTRATION INSTITUTE

Survey of Electronic Funds Transfer Transactions

Date _____

Bank Name _____

Street Address _____ State _____ Zip _____

City _____ Title _____

Name _____ (of person to be contacted about survey date)

Phone _____

Name _____ Title _____
(of person to receive completed survey if different from above)

Please report all actual counts. *Do not round off.*

**ACH TRANSACTIONS**—any electronic funds transfer transactions processed through a local or regional automated clearinghouse, including any items you have processed for your own customers.

**RETURNED ACH TRANSACTIONS:**

***Sent***—any ACH transaction that you returned to the originator because you were unable to post to an account or for which no prenotification was on file.

***Received***—any ACH transaction that you originated, but which was returned to you by the ACH or the intended receiver.

**ACH DEBIT TRANSACTIONS:**

***Insurance Premium, Home Mortgage***—any ACH transaction sent or received by you for the payment of a consumer obligation.

***Telephone Bill Payment***—any ACH transaction sent or received by you as a result of a telephone bill payment program at a financial institution.

***Corporate Payment***—any ACH transaction sent or received by you that was originated by a corporation for the account of a corporation.

## I. ACH TRANSACTIONS

| QUESTION | Question Relationship | MONDAY | | TUESDAY | | WEDNESDAY | | THURSDAY | | FRIDAY | | SAT.—SUN. | | WEEKLY TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sent | Received | Sent | Received | Sent | Received | Sent | Received | Sent | Received | Sent | Received | Sent | Received |
| **1./2.** Debits | — | | | | | | | | | | | | | 1. | 2. |
| **3./4.** Credits | — | | | | | | | | | | | | | 3. | 4. |
| **5./6.** Total ACH transactions | 1+3=5<br>2+4=6 | | | | | | | | | | | | | 5. | 6. |

## II. RETURNED ACH TRANSACTIONS

| QUESTION | Question Relationship | MONDAY | | TUESDAY | | WEDNESDAY | | THURSDAY | | FRIDAY | | SAT.—SUN. | | WEEKLY TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sent | Received | Sent | Received | Sent | Received | Sent | Received | Sent | Received | Sent | Received | Sent | Received |
| **7./8.** Debits returned | — | | | | | | | | | | | | | 7. | 8. |
| **9./10.** Credits returned | — | | | | | | | | | | | | | 9. | 10. |
| **11./12.** Total returned transactions | 7+9=11<br>8+10=12 | | | | | | | | | | | | | 11. | 12. |

## III. ACH DEBIT TRANSACTIONS

| QUESTION | Question Relationship | MONDAY | | TUESDAY | | WEDNESDAY | | THURSDAY | | FRIDAY | | SAT.—SUN. | | WEEKLY TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sent | Received | Sent | Received | Sent | Received | Sent | Received | Sent | Received | Sent | Received | Sent | Received |
| **13./14.** Insurance premium | — | | | | | | | | | | | | | 13. | 14. |
| **15./16** Home mortgage | — | | | | | | | | | | | | | 15. | 16. |
| **17./18.** Telephone bill payment | — | | | | | | | | | | | | | 17. | 18. |
| **19./20.** Corporate payment—replacement for depository transfer | — | | | | | | | | | | | | | 19. | 20. |
| **21./22.** Other payments | — | | | | | | | | | | | | | 21. | 22. |
| **23./24.** Total ACH debit transactions | 13+15+17+19+21=23<br>14+16+18+20+22=24 | | | | | | | | | | | | | 23. | 24. |

Are you participating in an interchange environment? (Circle one)

1. No 2. Yes

If *no*, complete Table IV *only* and skip to Table VI.
If *yes*, complete Tables IV *and* V and continue to Table VI.

Please report all actual counts. Do *not* round off.

**ATM TRANSACTIONS—PROPRIETARY**—any transactions initiated at *your* bank's automated teller machine by *your* customers.

## IV. ATM TRANSACTIONS—PROPRIETARY

| QUESTION | Question Relationship | Monday | Tuesday | Wednesday | Thursday | Friday | Sat./Sun. | WEEKLY TOTAL |
|---|---|---|---|---|---|---|---|---|
| **25.** Total number of cash withdrawals from checking. | | | | | | | | **25.** |
| **26.** Total number of cash withdrawals from savings. | | | | | | | | **26.** |
| **27.** Total number of cash withdrawals from credit card. | | | | | | | | **27.** |
| **28.** Total number of balance inquiries. | | | | | | | | **28.** |
| **29.** Total number of transfers between checking, savings, and credit card accounts. | | | | | | | | **29.** |
| **30.** Total number of checking deposits received. | | | | | | | | **30.** |
| **31.** Total number of savings deposits received. | | | | | | | | **31.** |
| **32.** Total number of bill payments. | | | | | | | | **32.** |
| **33.** Total number of other ATM transactions. | | | | | | | | **33.** |
| **34.** Total ATM transactions. | 25+26+27+28+29+30+31+32+33=34 | | | | | | | **34.** |
| **35.** Total dollar value of items in No. 25. | | $ | $ | $ | $ | $ | $ | **35. $** |
| **36.** Total dollar value of items in No. 26. | | $ | $ | $ | $ | $ | $ | **36. $** |
| **37.** Total dollar value of items in No. 27. | | $ | $ | $ | $ | $ | $ | **37. $** |
| **38.** Total dollar value of items in No. 30. | | $ | $ | $ | $ | $ | $ | **38. $** |
| **39.** Total dollar value of items in No. 31. | | $ | $ | $ | $ | $ | $ | **39. $** |
| **40.** Total dollar value of items in No. 32. | | $ | $ | $ | $ | $ | $ | **40. $** |

Please report all actual counts. Do *not* round off.

**ATM TRANSACTIONS—INTERCHANGE**—any transactions initiated at *your* bank's automated teller machine by *another* financial institution's customer.

## V. ATM TRANSACTIONS—INTERCHANGE

| QUESTION | Question Relationship | Monday | Tuesday | Wednesday | Thursday | Friday | Sat./Sun. | WEEKLY TOTAL |
|---|---|---|---|---|---|---|---|---|
| **41.** Total number of cash withdrawals from checking | | | | | | | | **41.** |
| **42.** Total number of cash withdrawals from savings | | | | | | | | **42.** |
| **43.** Total number of cash withdrawals from credit card | | | | | | | | **43.** |
| **44.** Total number of balance inquiries | | | | | | | | **44.** |
| **45.** Total number of transfers between checking, savings, and credit card accounts | | | | | | | | **45.** |
| **46.** Total number of checking deposits received | | | | | | | | **46.** |
| **47.** Total number of savings deposits received | | | | | | | | **47.** |
| **48.** Total number of bill payments | | | | | | | | **48.** |
| **49.** Total number of other ATM transactions | | | | | | | | **49.** |
| **50.** Total ATM transactions | 41+42+43+44+45+46+47+48+49=50 | | | | | | | **50.** |
| **51.** Total dollar value of items in No. 41 | | $ | $ | $ | $ | $ | $ | **51.** $ |
| **52.** Total dollar value of items in No. 42 | | $ | $ | $ | $ | $ | $ | **52.** $ |
| **53.** Total dollar value of items in No. 43 | | $ | $ | $ | $ | $ | $ | **53.** $ |
| **54.** Total dollar value of items in No. 46 | | $ | $ | $ | $ | $ | $ | **54.** $ |
| **55.** Total dollar value of items in No. 47 | | $ | $ | $ | $ | $ | $ | **55.** $ |
| **56.** Total dollar value of items in No. 48 | | $ | $ | $ | $ | $ | $ | **56.** $ |

## VI. ATM LOCATIONS

| Please complete the following questions: | | MAIN OFFICE | | | | BRANCH OFFICES | | | | OFF-PREMISE UNITS | | | | | | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Lobby | Vestibule | Through the Wall | Drive-up | Lobby | Vestibule | Through the Wall | Drive-up | Free Standing | University/ College | Shopping Center | Grocery/ Retail Store | Office/ Corporate Complex | Hospital | Other | |
| How many automated teller machines/cash dispensers do you presently have in service? | Automated Teller Machine | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 |
| | Cash Dispenser | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 |
| How many automated teller machines/cash dispensers do you plan to install in the next 12 months? | Automated Teller Machine | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 |
| | Cash Dispenser | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 |
| What was the total volume of *proprietary* ATM transactions for all machines installed at each location during the test period, excluding balance inquiries? | Automated Teller Machine | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 |
| | Cash Dispenser | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 |
| What was the total volume of *interchange* ATM transactions for all machines at each location during the test period, excluding balance inquiries? | Automated Teller Machine | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 |
| | Cash Dispenser | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 |

**NOTE:**

72=Sum of 57 through 71
88=Sum of 73 through 87
104=Sum of 89 through 103
120=Sum of 105 through 119
136=Sum of 121 through 135
152=Sum of 137 through 151
168=Sum of 153 through 167
184=Sum of 169 through 183

**NUMBER OF CARDS OUTSTANDING**—total number of cards issued since ATM program introduction with validated access capability

**HOUSEHOLD**—a social unit comprised of those living together in the same dwelling

**NUMBER OF HOUSEHOLDS**—total number of households that have at least one ATM access card outstanding

**NUMBER OF ACTIVE CARDS**—total number of ATM access cards with a usage rate of at least once per month

## VII. ATM ACCESS CARDS

| Type of ATM Access Card | Number of Cards Outstanding | Number of Households | Number of Active Cards |
|---|---|---|---|
| Proprietary ATM card | 185 | 186 | 187 |
| Local/regional network ATM card | 188 | 189 | 190 |
| National ATM card | 191 | 192 | 193 |
| VISA debit card | 194 | 195 | 196 |
| VISA credit card | 197 | 198 | 199 |
| MasterCard debit card | 200 | 201 | 202 |
| MasterCard credit card | 203 | 204 | 205 |
| Other (please specify) _____ _____ | 206 | 207 | 208 |
| TOTALS | 209 | 210 | 211 |

**NOTE:**

209=Sum of 185 through 206
210=Sum of 186 through 207
211=Sum of 187 through 208

## VIII. ATM SERVICE CHARGES

212. Does your bank levy a service charge on customers for using the ATM? (Circle one)

1. No 2. Yes

213. How is your service charge on ATM transactions structured? (Circle one)

1. Per transaction charge
2. Flat fee
3. Flat fee and per transaction charge
4. Other (please specify)_____

214. Is your service charge for ATM transactions _____ the service charge for DDA paper items? (Circle one)

1. Higher than
2. Lower than
3. The same as

## IX. ON-LINE/OFF-LINE

215. Are your ATMs/cash dispensers currently (Circle one)

1. On-line?
2. Off-line?

## X. COMMENTS

**NOTE:** The results of the past Electronic Funds Transfer Transactions Survey contained appendices devoted to commentary from the nation's EFT professionals. Please provide your comments so that we can continue this valuable forum. How have conditions changed from last year? Attach a separate sheet if you need more space.

**ACH settlement**

**ACH prenotifications**

**ACH return items**

**ATM settlement**

**ATM vandalism**

**ATM availability**

**ATM fraud/losses**

**ATM security**

**Regulation E**

**Additional comments**

# APPENDIX B

## EFT GEOGRAPHIC AREAS

Figure B-1
EFT Geographic Areas

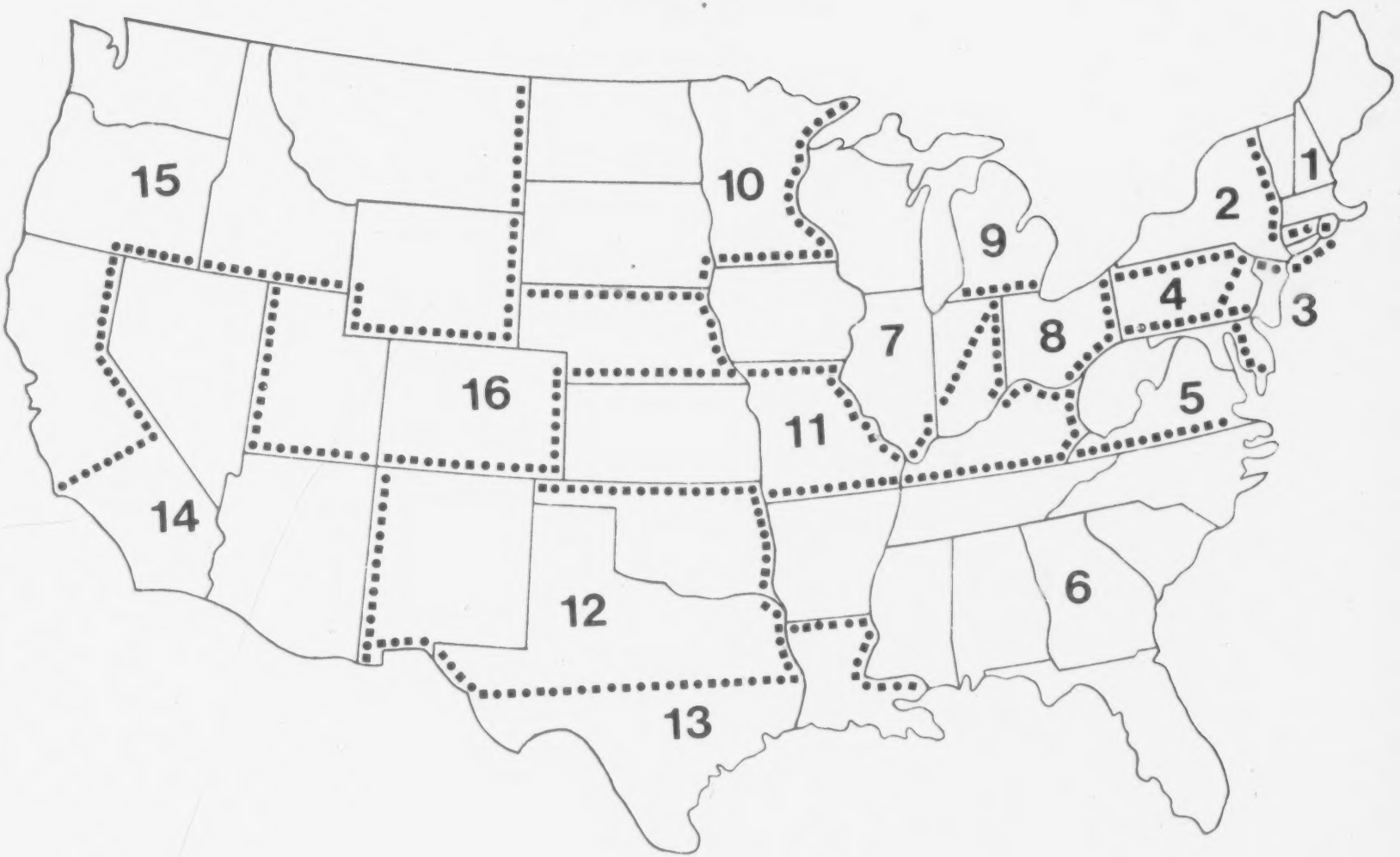

Table B-1

Survey Respondents by Geographic Area

| AREA* | ADL Survey Banks | | | | | All Reporting Banks+ | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1978 | 1979 | 1980 | 1981 | 1982 | 1978 | 1979 | 1980 | 1981 | 1982 |
| Boston | 3 | 1 | 3 | 2 | 2 | 10 | 9 | 12 | 10 | 9 |
| New York | 5 | 5 | 4 | 4 | 4 | 20 | 17 | 17 | 14 | 17 |
| Philadelphia | 3 | 1 | 2 | 3 | 2 | 18 | 22 | 24 | 18 | 15 |
| Pittsburgh | 3 | 2 | 3 | 3 | 2 | 6 | 5 | 5 | 5 | 4 |
| Washington, D.C. | 2 | 1 | 1 | 2 | 1 | 10 | 7 | 9 | 9 | 8 |
| Atlanta | 2 | 2 | 1 | 2 | 3 | 14 | 19 | 21 | 18 | 23 |
| Chicago | 6 | 3 | 5 | 3 | 5 | 12 | 8 | 11 | 12 | 11 |
| Cleveland | 3 | 3 | 3 | 3 | 3 | 12 | 11 | 11 | 13 | 12 |
| Detroit | 3 | 1 | 2 | 1 | 2 | 6 | 8 | 9 | 9 | 9 |
| Minneapolis/St. Paul | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 5 | 4 |
| St. Louis | 1 | 2 | 3 | 1 | 2 | 9 | 9 | 11 | 10 | 10 |
| Dallas | 3 | 2 | 3 | 2 | 2 | 6 | 4 | 6 | 7 | 5 |
| Houston | 2 | 2 | 2 | 2 | 1 | 8 | 9 | 8 | 5 | 7 |
| Los Angeles | 2 | 1 | 1 | 0 | 1 | 9 | 9 | 10 | 7 | 11 |
| San Francisco | 2 | 2 | 1 | 2 | 3 | 8 | 11 | 11 | 9 | 10 |
| Denver | 3 | 2 | 2 | 2 | 1 | 6 | 5 | 5 | 6 | 6 |
| Total banks | 43 | 30 | 36 | 33 | 35 | 154 | 153 | 170 | 157 | 161 |

*The Outlook for the Nation's Check Payment System: 1970-1980, Arthur D. Little, Inc., Cambridge, Massachusetts, December, 1970.

+The non-ADL banks are not necessarily located in the cities surveyed by ADL. For the sake of consistency, however, their data are included in a regional area that has as its center the city studied in this survey. All reporting banks include the data from the ADL banks.

APPENDIX C

PROBLEMS REPORTED BY BANKERS

The following comments were submitted by bankers who participated in the Institute's 1982 EFT survey. The purpose of this section is to inform bankers about overall problems in the ACH and the ATM payments systems. References to specific organizations, vendors, or pieces of equipment are omitted.

ACH: Settlement

"Settlement of Surepay monies has never been a problem due to a good liaison between the institutions and people involved."

"Reduced the number of general ledger accounts from 12 to seven. Tickets and settlement time have been reduced by about 35%. Debit and credit items are now posted to the same account instead of individually."

"We have added more than 500 originating items over the last six months. Volume received has increased by only a small percentage."

"Items with effective entry date on weekend days are not settled until Monday by the Fed. Bank systems usually back up to Friday. Frequently the Fed will return the item due to postdating and create delays because the bank has to resubmit deposits."

"The biggest single problem regarding settlement is ensuring that receiving institutions operate within the ACH rule, by making funds available on their effective date."

"We are now processing several internal functions as well as external functions through the system. Settlement procedures are becoming much more complicated."

"When cash concentration items are handled, the window should be extended for processing during the day, so that the credit could be received the same day."

"Companies are not following depositing procedures with their originating banks. The Fed does not give credit until funds are received. Therefore, receiving institutions that post items on the effective date are not receiving credit to offset these transactions on a timely basis."

"Some problems have been experienced in receiving the statement of activity with ACH tapes. Also experienced occasional difficulty with having ACH tapes misrouted, causing delay in posting."

"We are using the time critical debit window. We are now able to receive CIEs. We added a CIE/concentrater module. We are working on having ATM transactions go through ACH as an interface to our other systems."

"The number of settlement customers has increased 17% over 1981. Our bank and its correspondents are satisfied with the timeliness of receipt of settlement reports from the local ACH."

"The actual mechanics of ACH settlement remains basically the same as last year. One variation noted is that through bank merger a Federal Reserve account was acquired and is now the ACH settlement account. From the standpoint of reconcilement and control, the use of the Reserve account has proven to be far above the correspondent settlement account used last year."

"ACH settlement for ACH transactions between Hawaiian institutions will be made locally by the Hawaiian regional processing center rather than through the FRB."

"Statements of ACH activity from the Federal Reserve are totaled by entry date. It is sometimes difficult to reconcile the batch totals to the Fed statement. The Federal Reserve should disclose batch totals on the statement."

"We continue to experience settlement problems due to limitations in options offered by FRB NACHA ACH 76."

"Settlement of items sent and received via the ACH has caused few problems considering the volume transmitted between our facilities."

ACH: Prenotifications

"Some originating financial institutions are still not allowing enough time (at least 10 business days) between prenotes and live transactions. This has caused some minor problems with our customers."

"When prenotes are originated, some notices of errors or rejections do not get back to us in time to correct the problem (10 days.) It may be best to prenote 15 days in advance, especially the first time."

"Receipt of debit prenotes for share draft items that have the bank routing number instead of a credit union routing number is causing considerable additional paper work. Would like to see a standard established for the length of time an inactive prenote is retained on the file."

"On many occasions prenotifications are not received prior to live transactions. Most receiving financial institutions ignore prenotifications."

"We find that many financial institutions do not respond within the prescribed 10-day time limit and many do not respond at all."

"Currently we are experiencing more response on ACH prenotifications which contain erroneous information; however, the response is still poor nationwide."

"Financial institutions are not verifying prenotes. Problems are not being discovered until live-dollar transactions are processed."

"Response to prenotes remains pitiful. The primary problems are (1) lack of knowledge of both the purpose of the entry and procedures for handling, and (2) the fact that there is no compelling reason for a bank to do anything with the transaction. Since the transactions is "0" dollars, failure to act will not result in an out-of-balance condition."

"ACH prenotifications, to an extent, have been considered by some receiving depository financial institutions as "busy work," i.e., do not worry about the transaction unless it has a monetary value. This year has seen a positive realization of prenotifications by the financial community, the results of which are evident by the timely response and reduction in problems that we are experiencing."

There have been "recurring problems regarding credit unions. Since we process paper drafts for credit unions but do not intercept electronic transactions, we frequently receive prenotifications with our ABA R/T number (usually obtained from the MICR-line of customer check) when it should have been setup with the R/T assigned to the individual credit union. The originating bank should have the responsibility of educating its customers to be aware of this situation, which (at least from our perspective) involves most of prenote returns."

"I do not believe 10 days are enough for prenotes if they are invalid. It is insufficient time to have them returned before the company puts out a live tape."

"Very few if any prenotifications are ever returned, yet we do receive live entry returns for invalid account numbers. Few institutions return rejected prenotes."

"Receiving banks still continue to disregard prenotification resulting in the rejection of live transactions."

"The turnover of these items should be handled on a more timely basis by the receiving banks, which would effectively accomplish the purpose of prenoting. In some instances, live dollar entries have been processed 10 days after the prenotes have been received along with a paper return correcting the prenote."

"The 10-day prenotification time frame is not sufficient time to check prenotes and return rejected prenotes and notifications of change to the originator before sending live payrolls."

ACH: Return Items

"Because return items are still a manual function with most banks, we are still experiencing a five- to 10-day turnaround time on returns. Our bank has automated its returns and our longest turnaround time is two business days."

"Our returns are done manually and require at least 1-3 hours daily work to research and return the items."

"Cash concentration debits/returns need to be processed more quickly. We would lke to see response by software companies to program automatic returns."

"The biggest problem regarding return items is the time lag in getting the items returned. Automating this process throughout the system would prove beneficial. Paperwork and charges do not coincide."

"Returns should be automated. In many instances returns are not processed in a timely manner."

"The single largest problem facing the ACH system."

"The return items are not being processed promptly. It takes too long for the receiving banks to return the item and the procedures for denying the item are too lengthy."

"Automation of entries for ACH returns is being considered by our systems programming department for the enhancement of our ACH system."

"Manually prepared entries do not carry adequate information and in many cases the information is entered incorrectly."

"Return items are still extremely slow in coming back through the system. Originating customers are very unhappy with the present turnaround time."

"We are having problems with New York banks refusing ACH return items. They claim that these items are duplicate entries which they are not. I believe this problem should be brought to the attention of the New York Automated Clearing House."

"We have added an automated return module."

"There has been a 60% increase in return items in the past year."

"Over the past year there has been an improvement in the timeliness of ACH returns. Education is necessary to make receiving institutions aware that ACH return items fall under the same timing constraints as checks. The paper crunch in ACH return item processing will not be alleviated until the major software vendors come up with packages capable of returning nonpostable items back to the originator through the ACH system."

"We are experiencing an improvement in the amount of "return time" for requested and/or rejected transactions. We are beginning to evaluate the use of an automated return module for further expediting the return of these transactions to the originating point."

"As much as three weeks pass before returns are worked on in the New York Fed. There is slow turnaround time on return item processing. Have lost funds due to this with insurance companies on premium returns to New York."

"It is essential that the originating institution be responsible for the quality of the input it processes for its corporate customers (originating companies). Review and analysis of data before processing and basic education of the personnel who maintain the individual data (from employees) are essential. Lack of quality control (more than any other factor) is the primary cause of return items."

"Some institutions expect companies to accept very late items. Perhaps a new memo should be sent to all banks explaining exact times."

"Attempts to automate return items have not been supported by some software companies."

"The following problems have been encountered with returns: not returned in a timely manner — 40%; wrong return reason codes — 30%; return advice not stamped with a dated endorsement stamp — 95%.

"The volume of return items is heavy and has increased in the past months; returns, however, are being handled on a timely basis."

"Return items take from three to 15 days to be received by the originator. Because of time delay, additional payments are sometimes sent through the ACH creating additional exceptions."

ACH: Miscellaneous

"The relationship and the communications between our facility and the ACH have improved considerably over the past year. The ACH has assisted us several times to assure that our data have been disbursed on a timely basis."

"Training should be provided to receiving financial institutions on the processing of electronic fund transfer transactions. Financial institutions are not making funds available on EFT transactions in a timely manner."

"Private sector (non-FRB) development will have a major input in our area."

"ACH corporate-to-corporate will also have a major impact because it is designed for larger, software-smart institutions."

"Industry organizations and the Federal Reserve should promote ACH services through the chief executive officers of private corporations and utilities."

ATM: Settlement

"Conversion to on-line has cut settlement time substantially."

"Now we centrally balance all remote ATMs, which was previously done by the nearest branch office."

"Settlement takes 10 minutes of branch time. The branch removes and proves cash, counts deposited items, and logs and forwards to the central settlement area. Settlement differences average $20/month for all ATMs."

"With increased interchange, settlement has become cumbersome. However, new techniques have smoothed the process considerably."

"Centralized reconciliation is easier to control but more costly."

"Network settlement through an association and the Federal Reserve Bank is inappropriate in adhering to time restraints addressed in the bylaws. Associate banks become negligent when little or no enforcement is available."

"We're moving towards centralization of all ATM balancing, settling, and depository processing."

"Most of our branches remove deposits twice daily at 9:00 a.m. and 2:00 p.m. Cash replacement averages once a week, with high-volume machines adding currency about mid-week."

"The settlement procedure involving our ATM system has remained unchanged and will continue to do so pending implementation of new support software scheduled for early 1983."

"Systems improvements have allowed more efficient settlement. Losses and delays in posting transactions have been minimized."

ATM: Vandalism

"Vandalism is minimal considering the exposure of the machines."

"Vandalism is on the increase mainly due to customer frustration when ATMs are off line or when a card is captured."

"A couple of plaques and pens have been stolen from the ATMs."

"All our ATMs are presently on bank property. In acquiring off-premise ATMs, location and adequate lighting are essential. An analysis of a vendor should include terminals equipped with cameras, full-alarm lining systems, heat sensors, door contacts, and a silent combination lock to protect bank personnel.

"We have two to three cases of vandalism a year."

"Vandalism is not a major problem. In those few instances where it has occurred, the presence of cameras has aided in recovery."

"It is on the increase and a growing concern."

"Minor vandalism has occurred at our off-premise offices."

"Considering the number of ATMs installed, vandalism requiring vendor service is limited. Currently we have 56 machines, and approximately five instances of vandalism totaling $4,000 are on record."

"Only four instances of vandalism have occurred in one year — none major — with an approximate total replacement cost $975."

"Although our ATM system increased in size dramatically during 1982, we have experienced no significant increase at present in vandal attempts on the ATMs."

"Vandalism has been minimal. One ATM, however, was put completely out of service with a sledge hammer. Minor vandalism has been in the form of coins in the cardhandler, cards in the depository opening, grass and other foreign matter in the card-handler, and a hacksaw blade in the receipt exit."

"We have had minimal problems with vandalism this year, only several minor incidents."

"ATM vandalism is up from last year. We have to take measures to develop vandalism sensors that will notify us when a possible vandalism occurs and to activate the ATM camera to snap 14-16 frames of the person at the ATM, at that time."

"There has been minimal vandalism — approximately 25 occurrences, mostly to phones."

ATM: Availability

"Availability has improved since the installation of the new mainframe."

"A 2% decrease has occurred because of increased usage."

"One main factor of our successful ATM program, is that we maintain a 98% uptime."

"Customer availability averages 97.7% and machine availability 98.5%."

"We have 98% availability around the clock: 98% during the critical operating hours of 7:00 a.m. - 11:00 p.m."

"We have excellent availability, consistently averaging over 98%."

"Currently our ATM availability quotient is 95%. Keeping records on terminal availability is an important issue in renewing contracts."

"Availability is 90 to 95%."

"We have a 96% availability, with 4% due to settlement of system."

"We have 98% availability from 6:00 a.m. to 11:00 p.m."

"Our network expectation has always been for no less than 97% uptime. We are currently averaging 97.06% for the year. Vendor machine modifications have been instrumental in keeping high availability."

"Downtime (when ATMs are closed and unavailable for customer use) increased slightly over 1981. The increase is primarily attributed to the dramatic growth in our ATM network concerning software development and testing and the hardware malfunctions that are normally associated with a newly installed ATM."

"With 18 hour service to nearly all of our ATM locations, we believe customer availability has been excellent. Our ATMs average 98% up-time. Our locations are generally clustered so customers are always fairly close to an ATM location."

"The network now authorizes transactions our customers make at foreign terminals when our data processing center is down."

"ATM availability, systemwide, increased this year to approximately 97%. In our busiest locations, we have installed multiple ATMs so that if there is a problem with one machine, there is still availability at the site. We believe that the intensive regularly scheduled maintenance program we instituted this year had great impact on improving availability."

"Availability was 93% overall, with an increase of 2%. However, during 1982 we initiated availability reporting by activity time frames: 11:00 p.m. - 7:00 a.m.; 7:00 a.m. - 3:00 p.m.; 3:00 p.m. - 11:00 p.m. Results have been: 88%, 94%, 97%, respectively.

ATM: Fraud/Losses

"The fraud/losses situation improved. Losses in 1981 and 1982 were about even with more ATMs in the network."

"Fraud/losses were down significantly due to improved methods and additional camera coverage."

"Total claims increased by 25%."

"Year-to-date fraud/losses were up 130%; camera installations should counter the trend."

"With fraud/losses on the rise, we have instituted stricter collection procedures and made the decision to go on-line."

"Losses have increased approximately 10%."

"Losses totaled $20,000 in 1981 and 1982. They will definitely grow as customers become more aware of their rights under Reg. E."

"There has been minimal outright fraud, mostly individual accounting errors."

"Losses are five times greater than the previous year."

"Although our transactions have increased 28% and our number of customers using the ATMs has increased 28%, our losses have decreased 57%, mostly due to resolving several camera problems."

"The dollar amount is down approximately 30% from 1981 figures, with an increase of 25% in card activity."

"An increase has been noticed in stolen card activity. Even when prewarned, customers will retain their PIN with the card. Establishing a 24-hour service capable of immediately updating hot card data listings will help curtail this activity."

"Our 1982 losses were small; however, as the network has grown, losses have grown accordingly. Again, cameras have aided in recoveries."

"Banks will be placing more emphasis on customer education regarding potential fraud situations and personal security issues in the coming year. In the last six months we have seen an increase in reported unauthorized transactions due to lost/stolen cards. Possibly this is due to the present economy problems."

"Most fraud/losses result from stolen debit cards."

"Most fraud/losses occur when customers carry the card and the PIN together. Losses are currently running the same as last year."

"ATM fraud is minimal. The losses that we experience are primarily related to 'unauthorized' use of a customer's access card, as defined in Regulation E."

"The fraud/losses are higher than we would like. We feel our procedures are good."

"Through September, 1982, fraud/overdraft losses were significantly reduced from 1981. We believe this can be attributed to an on-line environment and improved follow-up investigations."

"Fraud/losses are leveling off due to automatic fraud tracking procedures."

"Our fraud/losses are way below the national average probably because of the way PINs are selected. PINs are selected by customers using PIN pads at teller terminals. No bank employee inputs the PIN."

"ATM frauds and losses are down from the same period last year. We have experienced an approximate 40% decrease in the amount of losses from the same period last year."

"Fraud/losses have been minimal — approximately $10,000. Most of the losses are due to fraudulent use of stolen/lost cards."

ATM: Security

"Recently we installed a CCTV and computerized security system."

"In 1982, we installed video monitor cameras on all ATMs. Fraud cases were cut by 90 percent and vandalism is almost nil."

"All ATMs except our off-premise ATMs have surveillance cameras."

"Security has been tightened. Each location is equipped with several alarms; therefore, entry is strictly monitored. Any breech of security is quickly detected and handled within moments. Constant attention is paid to new, more sophisticated systems; thus, we believe our ATMs are well guarded."

"The major problem that we are encountering in our off-premise installations is the development of a service team vs. branch personnel servicing the ATMs. A major consideration is security. Currently we are developing criteria on how to transport personnel and currency to off-premise installations."

"ATM security remains the same as last year. We have experienced no problems in this area."

"We are using security procedures that are stricter than those in the past."

Regulation E

"EFT error reports are up approximately 10% while our network has about doubled in one year."

"Reg E is too much a one-sided law. Customers are learning how to beat us."

"Our biggest problem with Reg E continues to be small customer liability of $50 when the customer writes the PIN on the card and it is stolen."

"Our system initially did not comply with Reg E when we were off-line. The customer did not know that primary account would be accessed until after the transaction occurred."

"There has been no problem conforming to the regulation as of this time."

"Procedures have been implemented for channeling Reg E questions through the customer service area and then to the central reconciliation area. We've encountered problems. All the problems thus far have been handled satisfactorily."

"Legislation must be examined regarding the customers' negligent care of their PINs resulting in losses. Institutions should not be liable in these cases."

"From a compliance standpoint our situation remains unchanged. From the standpoint of number of "alleged errors" and notification of "unauthorized" transfers, we have experienced an increase in the number of cases researched. Here again we have experienced a dramatic increase in the number of ATM cardholders during 1982."

"Reg E is the worst thing to happen since time began."

"The customers do not want to accept the fact that we have 10 days before we legally need to respond to them. We never take that long, but they do not realize that tracing items through several Fed districts takes some time."

"Massachusetts passed an EFT Act in December, 1981, which allows only 10 calendar days to resolve errors on EFT claims versus the 10 business days allowed by Reg. E."

ATM: Miscellaneous

"Regarding service charges, we are developing a program at the present time. Applying a customer service charge is a possibility for our program when it reaches a mature level."

"Next year we will be entering a shared network. We have also signed up as a member of PLUS."

"PIN control (returned mail) has been properly routed to audit. Plastic (returned mail) is routed to security."